

THE ZAKIM HOUSE

AGING IN A COMMUNITY CAMPUS IN NEWTON, MA



OUR TEAM

TEAM MEMBERS

Michael Alperin
Master in Public Policy, 2016
Harvard Kennedy School
Master of Business
Administration, 2016
MIT Sloan School of Management

Kyle Belcher
Master of Architecture in
Urban Design, 2015
Harvard Graduate School of Design

Daniel Feldman
Master of Architecture in
Urban Design, 2015
Harvard Graduate School of Design

Jonathan Sandor Goldman
Master in Urban Planning, 2015
Harvard Graduate School of Design

Ranjit John Korah
Master in Architecture II, 2016
Harvard Graduate School of Design

Marcus Mello
Master in Urban Planning, 2015
Master in Architecture I, 2017
Harvard Graduate School of Design

Margaret Scott
Master in Urban Planning, 2015
Harvard Graduate School of Design

Jon Springfield
Master in Urban Planning, 2015
Harvard Graduate School of Design

Rina Thomas
Juris Doctor, 2015
Harvard Law School

FACULTY ADVISOR

Harvard Graduate School of Design
James Stockard
Lecturer in Housing Studies

DESIGN MENTORS

Davis Square Architects
Ryan Marshall
Architectural Designer

Daniel Riggs
Job Captain

Ross Speer
Principal

FINANCE MENTOR

Middlesex Savings Bank
Chris Lippert
*Vice President,
Construction Lending Manager*

DEVELOPMENT PARTNER

*Jewish Community Housing for the
Elderly*
Tabetha McCartney
*Director of Development Finance &
Sustainability*

Alexis Smith
Enterprise Rose Architectural Fellow

WITH VERY SPECIAL THANKS TO:

Paula
Resident
JCHE Coleman House

Natalie
Resident
JCHE Coleman House

Meri
Resident
JCHE Genesis House

Robin Nasson
Executive Director
JCHE Coleman House

Cindy Katzeff
Director of Resident Services
JCHE Coleman House

Susan Stockard
Retired Partner
Maloney Properties

Jennifer Molinsky
Senior Research Associate
*Joint Center for Housing Studies of
Harvard University*

Deborah J. Goddard
Managing Director,
Policy & Program Development
MassHousing

JEWISH COMMUNITY HOUSING FOR THE ELDERLY

OUR DEVELOPMENT PARTNER

Jewish Community Housing for the Elderly (JCHE) is a non-profit, non-sectarian developer and operator of affordable housing for seniors. The organization was founded in 1965, and currently **owns and manages six developments, home to nearly 1,500 older adults of all backgrounds.** All JCHE developments are independent living facilities, and feature a high level of services and amenities, from fitness centers to auditoriums, and from Tai Chi classes to science lectures. **“Aging in community”** is JCHE's driving ideal; their buildings and programming are designed to foster the deep social connections that bring joy to residents' lives and promote health and longevity.

JCHE's success in providing high-quality, superbly managed affordable senior housing has earned it **numerous awards** from the National Affordable Housing Management Association, MassHousing, and the National Council on Aging, among others.

JCHE BY THE NUMBERS

- 6 developments
- 1,197 apartment for seniors
- 95% of apartments are affordable
- \$12,846 average income of income-qualified residents
- 28 countries represented by residents
- 19 languages spoken by residents
- 20% of residents volunteer
- 9.5 more years of independence compared to the national average

THE PROPOSED PROJECT

Zakim House, named in honor of local civil rights leader **Leonard P. Zakim**, brings elders and people of all backgrounds together in a welcoming residential community.

Trained as a lawyer, Zakim worked throughout his life to build connections across communities. He forged ties between the Boston area's religious and ethnic groups, working with Catholic and Protestant leaders to fight poverty and bigotry. One powerful example is the annual **“Freedom Seder,”** in which Zakim convened leaders from the black and Jewish communities to modernize the Passover tradition and **recognize ongoing struggles for equality.**

This project honors Lenny Zakim's **legacy of inclusion, community-building, and social justice.** Zakim House seeks not only to offer an affordable home for seniors, but also to stitch together the existing assets of the Gosman Campus and build a warm, intergenerational community. In doing so, Zakim House furthers JCHE's mission to serve elders by creating opportunities for affordable housing and aging in community. While deeply rooted in the Greater Boston community, Zakim House, and JCHE more broadly, serve as a nationwide example for innovative, thoughtful, and inclusive affordable housing for elders, to be replicated across the US.

LEONARD ZAKIM

THEMES AND VOICES

What does Aging at Zakim House Look Like?

ACTIVE Universal design principles promote activity for residents with full or limited mobility while a diversity of services and programs support independent living and promote dignity.

"I like to live life to the fullest. They make that possible here."

SOCIAL Central and distributed communal spaces with thoughtful programming address the challenge of isolation and foster a strong social network among residents and community members.

"Our staff arranges the chairs in small clusters of two or three, but residents always rearrange them into larger circles, or rows for people-watching."

CONNECTED Intergenerational and intercultural connections are formed across the Gosman Campus and throughout the broader Newton community, leveraging the unique adjacency to the Coleman House and the Jewish Community Center.

"I used to tutor, taking a bus each week to a school in Dorchester... I miss it desperately"

AFFIRMING Resident councils and volunteer opportunities highlight and validate residents' talents, backgrounds, and knowledge, recognizing the immense community benefit of residents' wealth of experiences.

"We have a Russian resident, an ex-ballerina, who was interested in dancing. She couldn't find a group of ballet dancers, but a group of residents welcomed her into their traditional Chinese dance troupe"

How does it get implemented?

SUSTAINABLE Thoughtful design choices and energy- and water-saving technologies help conserve precious natural resources while maintaining a comfortable environment for residents.

"We plan to own and operate these buildings forever, which means we can be more patient with the payback periods for our most ambitious sustainability investments."

INNOVATIVE A unique financing structure bridges the affordability gap for moderate income seniors and suggest strategies for better connecting healthcare and housing funding sources.

"We will... explore creative financing/ revenue opportunities. That way we can assure our continued stability and allow for investments to foster growth."

RESPONSIBLE Efficient and effective design provides high-quality homes for as many seniors as possible, fulfilling social goals while maximizing economies of scale on campus.

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EXECUTIVE SUMMARY

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JUDGING CRITERIA

PROJECT SUMMARY

The Zakim House proposes 150 new units of housing for seniors on the Gosman Community Campus, already home to JCHE's 146-unit Coleman House and the Leventhal-Sidman Jewish Community Center. Expanding JCHE's presence in Newton addresses a critical need for more affordable senior housing in Greater Boston. With a reputable developer and a prime site, the project is well-positioned to receive public support. Zakim House includes 90 new low-income units, 15 moderate-income units, and 45 market-rate units, all with access to high-quality programming and on-site amenities.

The project aims to create a whole that is greater than the sum of its parts; Zakim House increases opportunities for interaction across the campus through flexible community spaces – courtyards, corridors, and campus trails – that combine circulation and programming. The building's design is sensitive to the unique characteristics of the wooded site and, more importantly, the needs of future residents for activity and accessibility. The development minimizes environmental impact and maximizes long-term cost savings by employing efficient design and on-site power generation. Total public subsidy amounts to \$155,400 per low-income unit, or \$92,300 per unit overall. By leveraging multiple sources of public and private financing, as well as a unique entrance deposit model for moderate-income and market-rate apartments, Zakim House achieves financial viability for an ambitious mixed-income, high-amenity development.

- 150** Apartments for Seniors
 - 90** for Extremely or Very Low Income Seniors
 - 15** for Moderate Income Seniors
 - 45** Market-Rate
- 1,600** Square Feet of Affordable Retail Space
- 19.6** Acres of Preserved Open Space
- 142** Temporary Construction Jobs
- 10.5** Permanent Jobs
- \$2.8 Million** in New Local Property Taxes over 15 Years
- \$8 Million** in Annual Nursing Home Cost Savings
- 419** Metric Tons of CO₂ Mitigated Annually
- 134,000** Cubic Feet of Stormwater Runoff Reduced





View from the exercise bridge to courtyard

JUDGING CRITERIA

Innovation

- Promotes a recoverable entrance deposit model, enabling residents to become agents in the realization of the development and their future community.
- Opens housing opportunities for the moderate income, a cohort frequently unable to qualify for assistance yet challenged by limited monthly income.
- Combines a unique layering of environmental systems together to maximize energy efficiency and cost-savings.
- Introduces an active residential and recreational campus, creating intergenerational community opportunities on site and fostering connections through the creation of public spaces.
- Creates a unique set of common spaces (such as corridors and courtyards) for residents, maximizing visibility and enabling flexibility throughout the development.

Project Financing

- Capitalizes on a range of funding in order to support 60% of units at or below 60% AMI, including units designated for seniors with developmental disabilities and those at or below 30% AMI.
- Utilizes Section 8 vouchers to accommodate elders moving from subsidized units into dedicated senior housing.
- Blends public and private sources, including federal tax credits, state funding, and foundation equity, to achieve ambitious project aims.
- Mitigates risk associated with commercial spaces through discounted rents while supporting local small businesses.
- Uses entrance deposit model to accommodate moderate and market rate income residents, and capture needed equity at project outset.

Project Feasibility

- Builds upon JCHE's experience, expertise, and reputation to advocate for additional affordable housing in a community with demonstrated need for a growing elderly population.
- Employs existing zoning regulations to enable senior housing on-site and takes advantage of the development's position to exceed Newton's 40B affordable housing requirements.
- Leverages the existing JCHE Coleman House to create economies of scale through shared staffing, programming, and communal spaces.
- Establishes fundamental cost-savings, principally through energy cogeneration and property management, to ensure longevity.
- Integrates into the JCC campus and builds upon existing community relationships to garner necessary project support.

Community Responsiveness

- Creates a welcoming and integrated campus that caters to the needs of elderly residents while serving the Newton community through a public cafe and an open groundfloor amphitheater.
- Serves a wide range of the aging population with 31 apartments set aside for seniors earning up to 30% AMI, including homeless individuals, 59 for those earning up to 60% AMI, and an additional 15 for moderate income earners (below 120% AMI).
- Dedicates comfortable studio clusters for extremely low income people with developmental disabilities, addressing a particularly underserved population by partnering with service specialists.
- Engages residents through thoughtful programming, flexible common spaces featuring exercise space and computer access, and an expansive interior courtyard.
- Furthers a model for community-based affordable housing for the elderly, embodying JCHE's mission to promote "aging in community."
- Addresses parking and congestion concerns through a strategic site plan and clear community outreach proposals.

Physical Design

- Integrates multi family housing thoughtfully and seamlessly into a wooded, suburban site.
- Creates building circulation through expansive corridor "bridges," interior courtyard, and welcoming entrance amphitheater.
- Employs universal design throughout to ensure accessibility for low mobility residents and "visitability" for campus guests.
- Enlivens the Gosman Campus with a strategic site plan including connecting paths of varying difficulty and redistributed parking.
- Generates strategic common spaces at different scales, including first floor unprogrammed spaces near the mail and laundry area, a dedicated art studio, and designated JCHE office spaces.

Environmental Sensitivity

- Introduces integrated energy co-generation systems to minimize greenhouse gas emissions.
- Ensures heating and cooling efficiency through the use of geothermal technologies.
- Leverages the development's orientation and sizable roof to capture solar energy with photovoltaic panels.
- Maximizes energy and water efficiency with EnergyStar and WaterSense appliances and natural daylighting.
- Conserves water through rainwater cisterns to collect water for landscaping, reducing reliance on water utilities.
- Maintains comfort for residents and maximizes efficiency with passive solar systems and a well insulated building envelope.



THE CONTEXT

AN AGING COUNTRY

AN AGING REGION

WHO WE SERVE

INTO THE COMMUNITY

RESIDENT INSIGHT

THE CAMPUS

ZONING & PERMITTING

AN AGING COUNTRY

The United States is on the verge of a major demographic shift. Given longer life expectancies and aging Baby Boomers, one in every five Americans will be over age 65 by 2030. As a consequence, our nation will face a severe shortage in appropriate housing to meet their needs.

Introduction

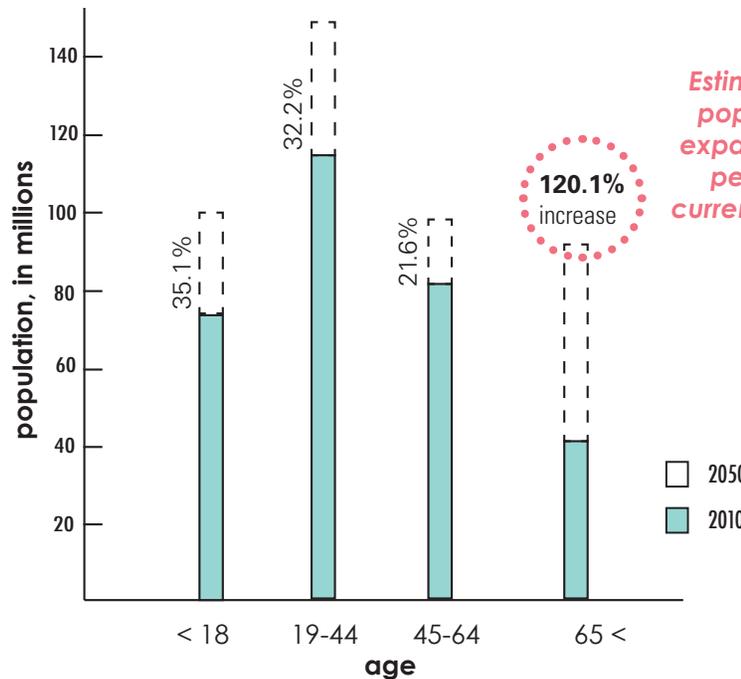
The United States is on the verge of a major demographic shift. Given longer life expectancies and aging Baby Boomers, one in every five Americans will be over age 65 by 2030. As a consequence, our nation will face a severe shortage in appropriate housing to meet their needs.

As people age, they need housing that is structurally and mechanically safe and that is designed to accommodate a full range of abilities. Access to grocery stores, doctors and community activities, and adequate transportation options to facilitate this access are also requirements for older adults.

Housing that was appropriate for raising a family becomes less so for smaller households. Social interaction

is important for a high quality of life and provides significant health benefits. However, given high rates of single-family homeownership among older Americans, isolation is often a major challenge.

Many Americans express a desire to "age in place". Although some of this preference is tied to the physical home, more important is the functional home: the place that fosters the social connections and living amenities that support health and happiness. Therefore, there is a strong trend among senior housing developers and advocates towards "aging in community" -- an approach that focuses on smaller, denser developments that place friends, new and old, as well as all of the necessities within either a single development or an accessible neighborhood.



Estimates predict that the population of seniors will expand by more than 120 percent, from 40 million currently to approximately 88 million in 2050.

Affordability and Availability

Access to affordable housing is a challenge across the country and a growing concern for seniors with limited incomes. In spite of a number of public, subsidized, and private housing developments for seniors, the Greater Boston area is no exception to this shortage. **Waitlists at Newton Housing Authority developments are between 3 and 5 years for single, family, or senior units.** Demand is consistently high in the Greater Boston area and the Boston Housing Authority estimates that they have anywhere between 1,000 and 12,000 applicants at any given time, far exceeding their capacity to house qualifying individuals.

Particularly striking evidence of this reality is the waitlist for Jewish Community Housing for the Elderly's units in the Greater Boston area. Waiting lists range anywhere from 2-3 years for an efficiency unit at the Ulin or Leventhal Houses in Brighton to 6-8 years for 1 bedroom units at the Genesis House, also in Brighton. At the Coleman House in Newton, just across from our project site, **the waitlist is longer than 3 years, demonstrating an urgent demand for affordable senior housing.**

Access to affordably priced housing is a particular challenge for seniors whose incomes are too high to qualify them for federally subsidized housing, but still have difficulty affording any of the private housing options available. Private independent living facilities nearby in Newton and neighboring Needham may range upwards of \$4,000 for a one bedroom.



AN AGING REGION

To deepen our understanding of the needs of the existing community and future residents of Zakim House, we researched the challenges and opportunities facing the Greater Boston region generally and the City of Newton specifically. Existing plans and resources complemented our outreach and interviews with residents and staff from the JCHE.

The Greater Boston Region

Although the region's recovery from the Great Recession has been stronger than that of the nation and of the Commonwealth as a whole, the share of residents who are "housing cost burdened" (spending more than 30% of income on housing) has jumped up dramatically, with over 50% of renters and 38% of homeowners experiencing housing cost burdens. Given this challenge and an expected population growth of 13%, the region will need to build an additional 349,000 new housing units by 2030.

Notably, one-third of residents in the region will be age 55 or older in 2030, spurring a particular demand for senior housing, services, and transit. These aging baby boomers will need to downsize, and include a large number of cost-burdened seniors who cannot keep up with rising housing costs.

"In sum, Greater Boston has entered a third demographic revolution... To temper soaring housing costs, we must build not only more housing but the right types: small multi-unit housing for millennials in our urban neighborhoods and multi-unit housing for baby boomers in the suburbs..."

"Correcting our overpriced, mismatched housing stock will require a whole new level of political will and economic imagination."

The Greater Boston Housing Report Card 2014-2015

The City of Newton

Through its planning process, Newton has articulated a need for providing more affordable housing options for families, persons with disabilities, and the elderly. Newton has a sizeable aging population with a long-term attachment to the city. Over 60% of residents aged 50 and above reported having lived in Newton for 25 years or longer. 85 percent of this group reported a strong feeling of belonging in Newton. This group expresses a strong desire to age in place in a manner which is affordable and allows for maintenance of rich social networks, remaining active in the community, and access to transportation.

In order to achieve a stated goal of a 10% affordable housing stock in 2021, Newton must create an additional 800 new affordable units. As part of a Consortium of surrounding towns

Existing Plans & Resources

MetroFuture: Making a Greater Boston Region, 2008

The Greater Boston Housing Report Card 2014-2015

Draft Comprehensive Plan FY16-20. Living and Aging in Newton: Now and In the Future, 2014

Comprehensive Permit Application for 135 Wells Avenue, 2014

Needham Street Briefing Book, 2013 Citizen Participation Plan, 2013

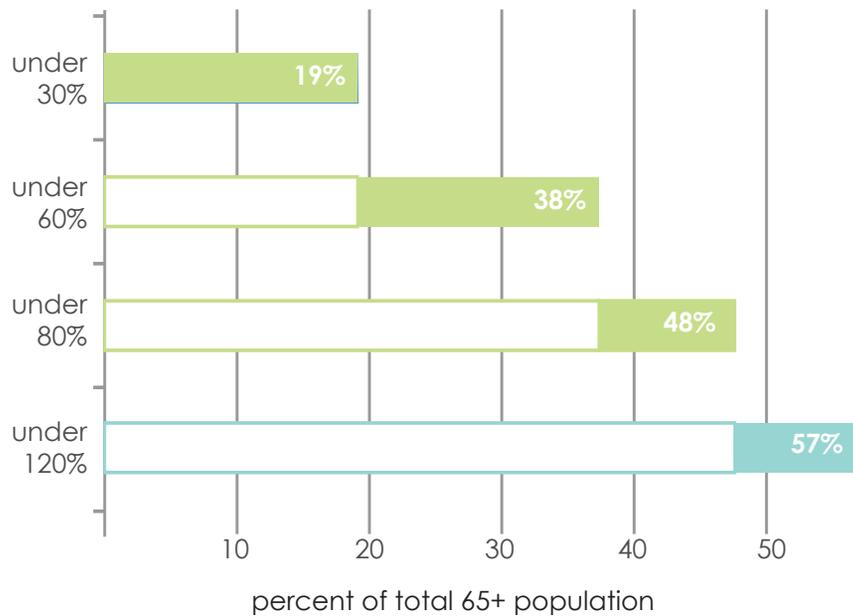
participating in HUD's HOME program for affordable housing, falls short of the Chapter 40B requirements, as only 8% of the Consortium's housing stock is currently subsidized. The affordable housing needs in Newton are most acute for households at or below 50% of area median income (AMI) and between 50-80 percent of AMI. Newton has an affordability gap, or shortage, of 2,800 units for households in the former group and 380 units for households in the latter. The affordability gap is measured as the difference between the number of households at a given income level and the housing units affordable at that income level.

Like much of Massachusetts, Newton is graying: 39% of Newton households have at least one member who is age 60 or older (ACS 2012). Just under a quarter of elderly Newton residents live alone, many in houses they own. While median income for seniors is higher in Newton (\$61,621) relative to Massachusetts overall (\$36,282), many residents nonetheless face economic insecurity, as over a quarter of Newton residents over age 65 report incomes below \$25,000. Furthermore, Hearth, Inc. reports that there are over 1,200 homeless adults over age 50 in Greater Boston.

Almost 800,000 Massachusetts residents are currently living with a disability, including over 150,000 who have lifelong developmental disabilities that exacerbate the challenge of finding appropriate affordable housing opportunities. In Newton, 61% of people 65 or older report having at least a single disability.

Economic Insecurity for Newton Seniors

(Income relative to AMI)



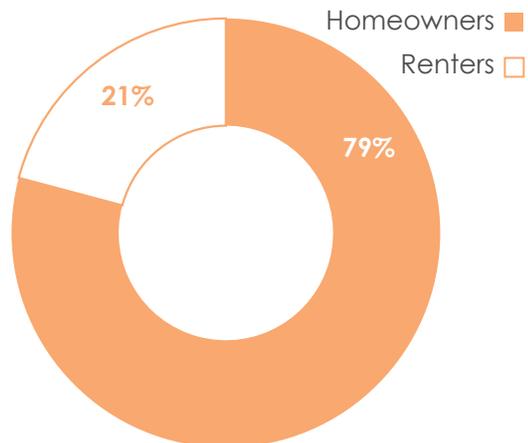
“Many older people in the area have homes that are too large for them, so they close off rooms one by one. They have lots of home equity, but not much income and too few appropriate housing options.”

- Tabetha, JCHE

A large number of Newton's seniors receive low or moderate incomes, with 38% under 60 percent of AMI. A large number also falls in the moderate-income range that struggles to afford market rents. Many of these seniors are currently homeowners, and they almost universally want to stay in Newton.

Publicized through the “Community First/Olmstead Plan,” the Massachusetts Executive Office of Health and Human Services has emphasized a commitment to ensuring that people with disabilities and elders have access to the resources needed to comfortably and safely age in place and in community. As the elder and disabled populations in Massachusetts continue to grow, thoughtful, cost-effective, and community-based developments are needed more than ever. The proposed Zakim House and the Gosman Campus will be well equipped to welcome elders with developmental disabilities who may be facing more complex challenges as they age.

Most Newton Seniors Own their Own Homes



WHO WE SERVE

AFFORDABLE - 90 UNITS

Permanently affordably priced units are set aside for seniors earning at or below 60% of the area median income (AMI). Out of concern for the most vulnerable seniors, units are also designated for those earning 30% or below of AMI, including homeless individuals. This need is clearly demonstrated by the waiting lists for affordable units in the area, whether at JCHE owned units or public housing authorities in Newton or Boston.

DISABILITY - 15 UNITS

Designated units are set aside for individuals who are aging with lifelong developmental disabilities. This serves a particularly vulnerable sector of the elderly population. Designated clusters enable elders to be served by a caregiver organization through a partnership with Jewish Child and Family Services. Individual studio units are oriented around comfortable shared living space, enabling social interaction and facilitating supervision by caregivers on site. The designated clusters enable privacy and independence for residents and caregivers while maintaining integration into the overall Zakim House development.

ENTRANCE DEPOSIT - 60 UNITS

Moderate-income and market-rate units require an entrance deposit. This financing structure addresses the specific needs of residents who are limited by a moderate monthly income but have access to home equity. The deposit is modeled after existing continuing care retirement community (CCRC) practices, with several significant distinctions. Whereas CCRC deposits are illiquid, sometimes leaving residents without cash to pay for unexpected expenses, JCHE, as a mission-driven nonprofit, would cover emergency withdrawals with philanthropic funds until the construction loan is repaid. Also, unlike many buy-in programs that determine the payout amount (upon an individual's departure from the facility) based solely on the amount paid by the new resident, JCHE would guarantee that at least 90% of the deposit would be returned to the resident through designated funds held in escrow.

"The deposit model is meant for two retired schoolteachers who worked in Newton their whole lives and want to stay. They can sell their homes, 'buy into our community, and afford to stay."

- Tabettha, JCHE

MODERATE-INCOME - 15 UNITS

Moderate-income rents are set based upon the area median income, and reserved for seniors making 80-120% of AMI but do have equity locked into an existing home. Since they do not qualify for most subsidized units but would be heavily burdened by existing market-rate rents, they often remain in homes that are larger than they need and that are costly to maintain.

MARKET - 45 UNITS

The market rate units operate under the same entrance deposit principles, in which residents contribute a fixed amount of equity at the beginning of their stay. This option is again envisioned for an individual or couple moving from homeownership into the rental market and looking for secure senior housing options in their community. Market rents are set to be slightly higher than those of the moderate-income bracket. Rates are comparable with those of other nearby private elderly housing developments and consistent with the market rent pricing at other units owned and operated by JCHE.

INTO THE COMMUNITY

COMMUNITY ENGAGEMENT STRATEGY

The Zakim House expects to become an integrated part of the JCHE network and the community in which it resides. To determine how best the development could be integrated, community outreach entailed a two-fold strategy. First, we spoke to local planning experts to identify potential concerns and outlined a broader community engagement strategy. Second, we reached out to current residents and staff at several JCHE developments to learn about resident experiences and determine best practices.

Anticipated Community Concerns

Given the suburban nature of the site and the lack of immediately abutting neighbors, the primary anticipated concerns will likely be related to parking and traffic. Several former town officials said that traffic along Nahanton Street - both at the entrance to our site and at the intersection with Winchester Street - can get heavy at peak times, and Newton residents are unsurprisingly wary of additional congestion. In light of this, the proposal anticipates several mitigating factors.

First, car ownership is significantly lower among elderly residents, thus mitigating impact compared to another development of similar density. Coleman House residents and staff indicated that the JCC parking lot is rarely at capacity, even during major events. Second, elderly residents have non-traditional travel

patterns and would be less likely than a non-senior population to drive at peak traffic times, thus reducing the impact on congestion. Third, a new on-ramp and extra travel lanes are currently planned for Route 128 (across the river on Kendrick Street) with a partial opening anticipated for July 2016. This will increase access to the site and potentially trigger a redesign of nearby streets for increased road capacity. As part of a community engagement strategy, we recommend JCHE perform a traffic and parking study to verify the anticipated minimal impact.

We also anticipate that community members may be generally resistant to new development or have concerns about the preservation of wooded or open space. In order to maintain the character of the surrounding neighborhood, the site plan is careful to preserve a buffer of trees between the road and building so that the building is minimally visible from the road.

Although the regional need for all types of affordable housing is severe, it bears noting that communities tend to be more welcoming to elderly affordable housing than other types. Senior developments tend to be "tax-positive," as they do not require certain services such as schools. Such developments may also generate broad-based support from the wider community for older residents' rights to have a healthy, safe, and quality place to live. In a community with a growing elderly population that is eager to age in place, Zakim House

will offer a new home to Newton's grandmothers and grandfathers.

Our outreach strategy will emphasize the numerous public benefits generated by the development. Residents from JCHE frequently engage in community service and other volunteer programs; the development preserves many acres of open space; and a new cafe and convenience store serve as local amenities.



RESIDENT INSIGHT

Resident Engagement

Community outreach with current JCHE residents, whether at Coleman House in Newton or at JCHE's Brighton campus, provided valuable insights into the experiences of current residents and generally reflected the needs and desires of the development's target elder population. Conversations with residents touched on key areas of concern, all of which are addressed in the planning and design of the Zakim House.

DESIGN. Residents appreciate the ability to live independently and have the privacy and comfort of an individual apartment with a kitchen and ample living space. Residents make frequent use of common spaces with flexible options for different uses, whether card games, language circles, or casual social events. Given the high demand for space, particularly at Coleman House, residents expressed a desire for more spaces to accommodate varied interests.

PROGRAMMING. Residents enjoy opportunities to attend programs and multi-cultural events organized by JCHE. They welcome the chance to engage in intergenerational programming, through events, training sessions with local medical students, or scheduled tutoring with younger children.

MOBILITY. Residents typically do not own a private vehicle, making it more difficult to access health care services, buy groceries, or attend cultural events in the Greater Boston area. The JCHE shuttle is greatly appreciated

but its limited schedule is often insufficient to meet the varied needs of residents. Walking is a challenge, especially in the wintertime, due to narrow sidewalks.



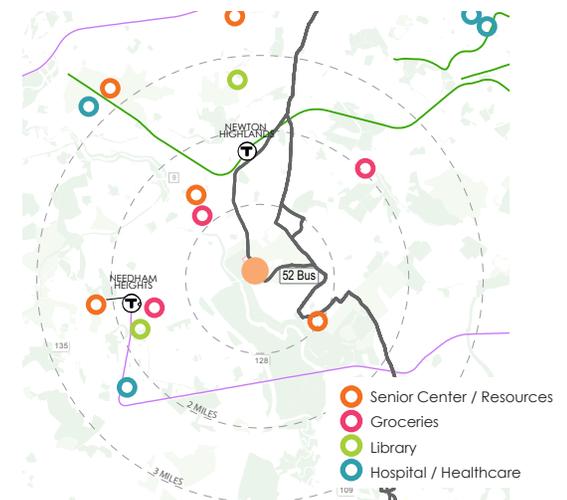
SENIOR RESOURCES. Conversations with residents as well as staff at the Coleman House revealed the specific challenges and advantages of the existing site. Though relatively suburban, Coleman House is nonetheless well connected with nearby resources for seniors, including dedicated community centers, programmed activities, and supportive networks.

Newton has a particularly strong network of organizations and activities geared toward the senior population, including the Senior Citizens Fund of Newton, the Newton Department of Senior Services, the Newton Council on Aging, and LeadingAge Massachusetts. Both the Newton and Needham Senior Centers offer

a range of activities, classes, meals, and opportunities for engagement for seniors in the area. Additional and periodic programming takes place at both the Newton and Needham Public Libraries and local recreation centers. Coleman House residents already take advantage of these services, with residents attending classes at the JCC on the campus, visiting with friends at the Needham Senior Center, or making use of JCHE's shuttle to participate in scheduled day trips to museums in Boston or on shopping trips to nearby grocery stores or shopping centers in Newton Center or Needham Heights. Zakim House will enhance all of these connections.

This understanding of the wide range of mobility, engagement, and desires of residents clarified the role of Zakim House as an extension of existing campus resources and a new node in the web of interconnected senior services across Newton and nearby Needham.

Senior Resources





"My rent had gone up sky high... it's a trauma to move, but you have to make a life for yourself or you waste it. I like to live life to the fullest. They make it possible here." - Paula, Coleman resident



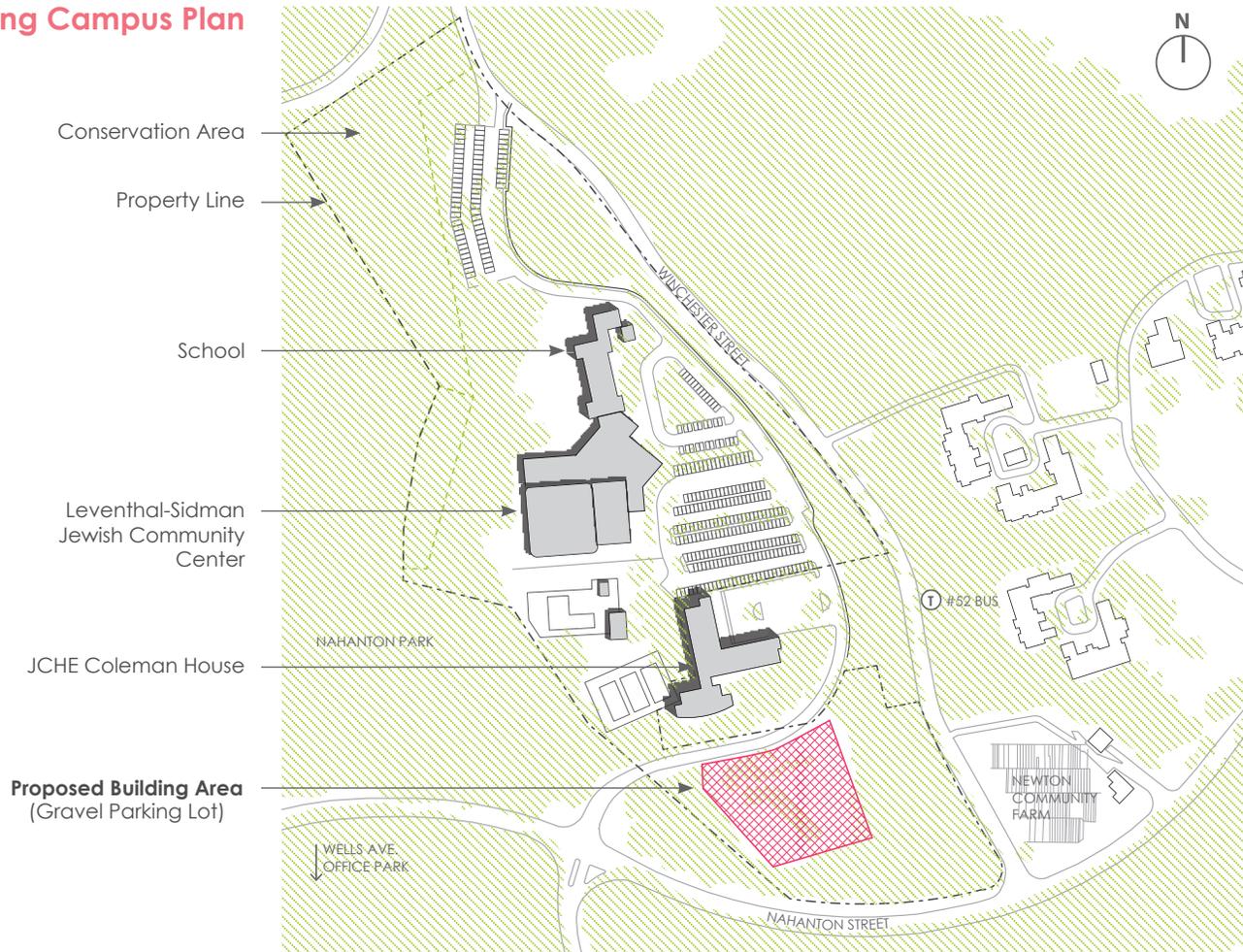
"Painting is good for my heart. It is medication against Alzheimers... This [painting] came with me across the Atlantic." - Meri, Genesis resident

Excerpt from a poem, written by Natalie, Coleman House resident

*The multi-purpose room is where most afternoons are spent
 By the knitters, heart sewers, the talkers and where
 some days there's an event.
 So we mingle and kibbitz and really it's fun
 The volunteers are terrific, their work is never done.
 For without their help this place would fall apart
 And I appreciate what they give from the bottom of
 my heart.*

*I'm exercising, seeing movies, playing bingo and such
 Making the most of living, counting my blessings, I
 have so much.*

Existing Campus Plan



THE CAMPUS

Zakim House represents the next step in the development of the larger Gosman Community Campus. The surrounding network of amenities for seniors provides a welcoming environment for residents who may be new to the Campus, resettling from another neighborhood or village in Newton or moving from elsewhere in the Greater Boston area.

The campus is tranquil and self-contained, bounded by Nahanton Park to the north and west, Winchester

Street to the east, and Nahanton Street to the south. The Campus is hilly, ranging from 130 to 160 feet in elevation. A thick line of trees along Winchester Street obscures the view of the condominiums, golf course, and community farm across the street.

A winding, two-lane road starting at the intersection of Nahanton Street and Wells Avenue provides a single point of access to the campus. The road bisects the campus, climbing uphill to wrap around one side of

Coleman House and the Leventhal-Sidman Jewish Community Center (JCC). Large parking areas straddle the space between the two buildings on the east side. Tennis courts and a pool sit between the two buildings on the west side.

The Leventhal-Sidman JCC has been in operation since 1983 and occupies a historic building once operated by the Catholic Archdiocese. The JCC serves as a community hub, hosting space for several Jewish philanthropic and community organizations and offering amenities such as day care, an early learning center, a fitness center, and art and dance studios.

Coleman House, owned and operated by JCHE, provides 146 one-bedroom rental units of senior independent living. Residents meet HUD income eligibility guidelines for subsidized housing. Coleman House strives to create a community for its senior residents by offering educational and cultural programming, exercise classes, healthcare coordination, and shopping trips. Community space at Coleman House includes multi-purpose and fitness rooms, a library and computer lab, beauty salon, convenience store, and other amenities.

The JCC currently owns the gravel parking area, where the Zakim House would be developed. They are discussing the sale of the land with JCHE. As a condition of any sale, the JCC would request that JCHE create 150 parking spaces to replace those that are currently on the gravel lot, and that current conservation areas remain undeveloped.

ZONING & PERMITTING

Underlying Zoning

Most of the Gosman Campus is zoned as “single residence,” with a designated parcel of “multi residence” zoning for the existing Coleman House. The Newton Board of Aldermen have granted three special permits to enable development over time. A 1981 special permit enabled modification of the site plan for a multi-purpose community facility (the JCC), relaxed height restrictions, and reduced parking requirements. A 1983 special permit created the parcel that now houses 146 units of senior living at Coleman House. The development proposal for Zakim House aligns with key requirements outlined in the Newton Zoning Code and the special permits granted to date.

While preserving the letter of most and spirit of all existing land use restrictions, JCHE would seek a waiver of two requirements in order to proceed with the development of Zakim House in the gravel lot area: specifically, the multi residence zone would need to be expanded to include the gravel area, and the height restriction would need to be loosened.

Specifically, JCHE would seek a special permit to construct 150 units of senior congregate housing. In addition, JCHE would seek a determination by the Board of Alderman that a daily shuttle, as well as the installation of ZipCar pod of four rental cars at the site would enable a reduction in the parking requirements to 0.25 stalls per unit. In order to obtain such permits, JCHE must seek review from the development and zoning offices, and participate in a public hearing

with the Board of Aldermen. JCHE has a strong case for the support of the Newton Board of Aldermen for the special permits needed to develop Zakim House:

- JCHE has a proven track record as a developer of senior housing in Newton, Boston, and Framingham.
- JCHE has been able to obtain special permits from the Newton Board to build senior housing in the past.
- A senior living development with many mobility-impaired residents who are unable to drive is unlikely to contribute to traffic congestion in the area.
- Despite the increased overall building height, the visual impact of the building from outside the heavily forested campus will still be minimal.
- Smart growth development goals are met through addition of multi-unit housing on an existing campus.

Newton's need for additional senior living is documented in the City's draft Consolidated Plan Through 2020, which acknowledges the City's significant population of aging baby boomers, need for seniors to downsize their living spaces, and long waitlists for subsidized senior housing.

Finally, recent controversies over development proposals have called into question whether Newton is meeting its Chapter 40B obligations to have at least 10% of its housing stock as affordable, or at least 1.5% of its land area devoted to such housing. Permitting Zakim House's 92 affordable senior units from an established and reputable developer should place Newton within its required percentage.

KEY LAND USE RESTRICTIONS

- **Preservation of 70% of the Campus as open space (currently at 77%)**
- **Protection of The Oak Grove and The Kettle conservation areas located on the northwest side of the Campus bordering Nahanton Park**
- **Preservation of existing topography and natural vegetation in the parking lot area where Zakim House would be located**
- **Installation of utilities underground**
- **No structure entirely visible from Nahanton Street and Winchester Street**
- **No structure located closer than 80 feet from either Nahanton Street or Winchester Street, and preservation of the row of white pine trees adjacent to that intersection**

The background is a green-tinted architectural rendering of a modern building courtyard. The building has multiple stories with rectangular windows. In the foreground, there are stone walls forming a courtyard area. Two people are walking on a path in the courtyard, and another person is standing on the right side, looking towards the building. The overall scene is bright and open.

THE DESIGN & INTEGRATED SUSTAINABILITY

UNIVERSAL & INCLUSIVE DESIGN

CAMPUS STRATEGY

AN ACTIVE COMMUNITY

SITE STRATEGY

BUILDING ENTRY

DESIGN APPROACH

PLANS

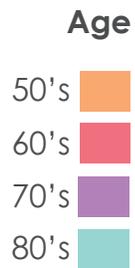
SUSTAINABLE STRATEGIES

UNIVERSAL & INCLUSIVE DESIGN

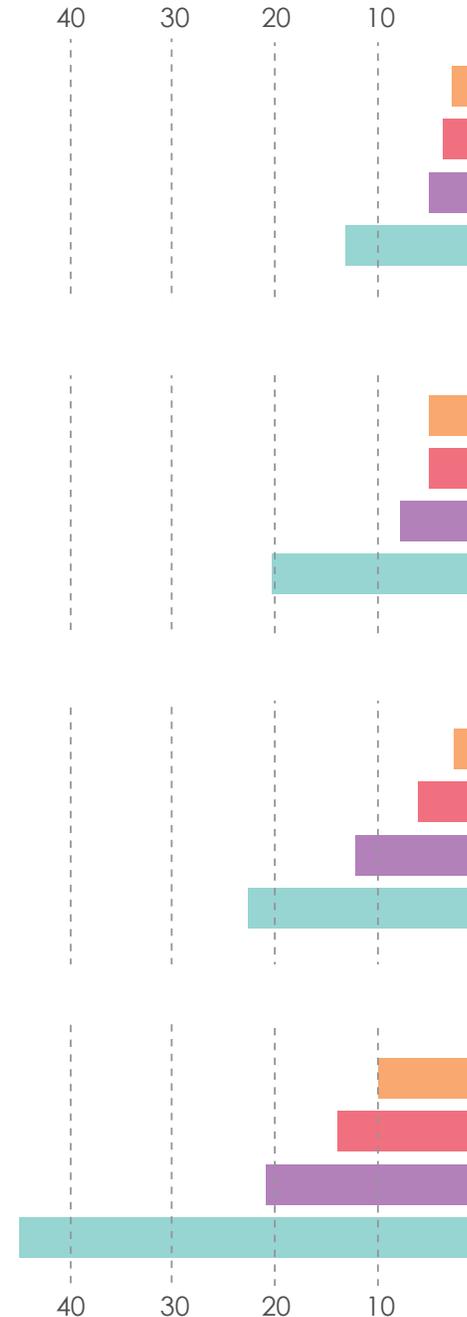
Universal design (UD) principles are integrated from the scale of the unit to the overall campus. UD maximizes accessibility and comfort for residents with limited mobility or other impairments, creating spaces that are visitable and usable by all. UD typically encompasses the following principles: equitable, flexible, and intuitive use; perceptible information for limited sensory ability; hazard minimization; low physical effort; and appropriate size and spacing for approach and use.

Universal design is a foundation of JCHE's mission to serve elders with inclusive and affordable housing. UD is advantageous for Zakim House and consistent with the development's vision for a community campus, open to a wide range of individuals and activities. UD is essential to ensure that seniors are able to comfortably "age in community," remaining in their units and the Zakim House community for as long as possible. As a facility primarily designated for seniors and those with developmental disabilities, the project utilizes UD to ensure accessibility. UD enables significant flexibility and options, from easy access to elevators for low mobility residents, to more challenging paths and stairways for active residents or campus visitors.

Consistent with Fair Housing and Americans with Disability Act (ADA) guidelines, the project ensures the accessibility and usability of building entrances, public and common use areas, doors, light switches, electrical outlets, thermostats, as well as kitchens and bathrooms within units. Specific design choices are outlined here.



Percent of Population with Significant Challenges



Design Decisions for Disability Accommodation

Visual

- colored doorways and hallways
- abundant natural light and well-lit spaces
- contrasting colors on edges and transitions

Cognitive

- glass corridors create visibility throughout the development
- inner courtyard creates orientation for all five buildings
- communal social spaces keep residents active and engaged

Hearing

- visual indicators utilized for household appliances (i.e. telephone, doorbell, intercom)
- communal spaces of all sizes create spaces suitable for smaller group conversations for the hard of hearing

Mobility

- approach clearances at the sink, toilet, shower and bedside clearances facilitate wheelchairs
- swinging door for shower
- paths throughout the campus are accessible to range of mobility users

CAMPUS STRATEGY

Proposed Pedestrian Paths

- Easy Paths
- Moderate Paths
- - - Challenging Paths

Parking Totals

Existing Surface	390
Proposed Surface	156
Proposed Underground	44

New Campus Total

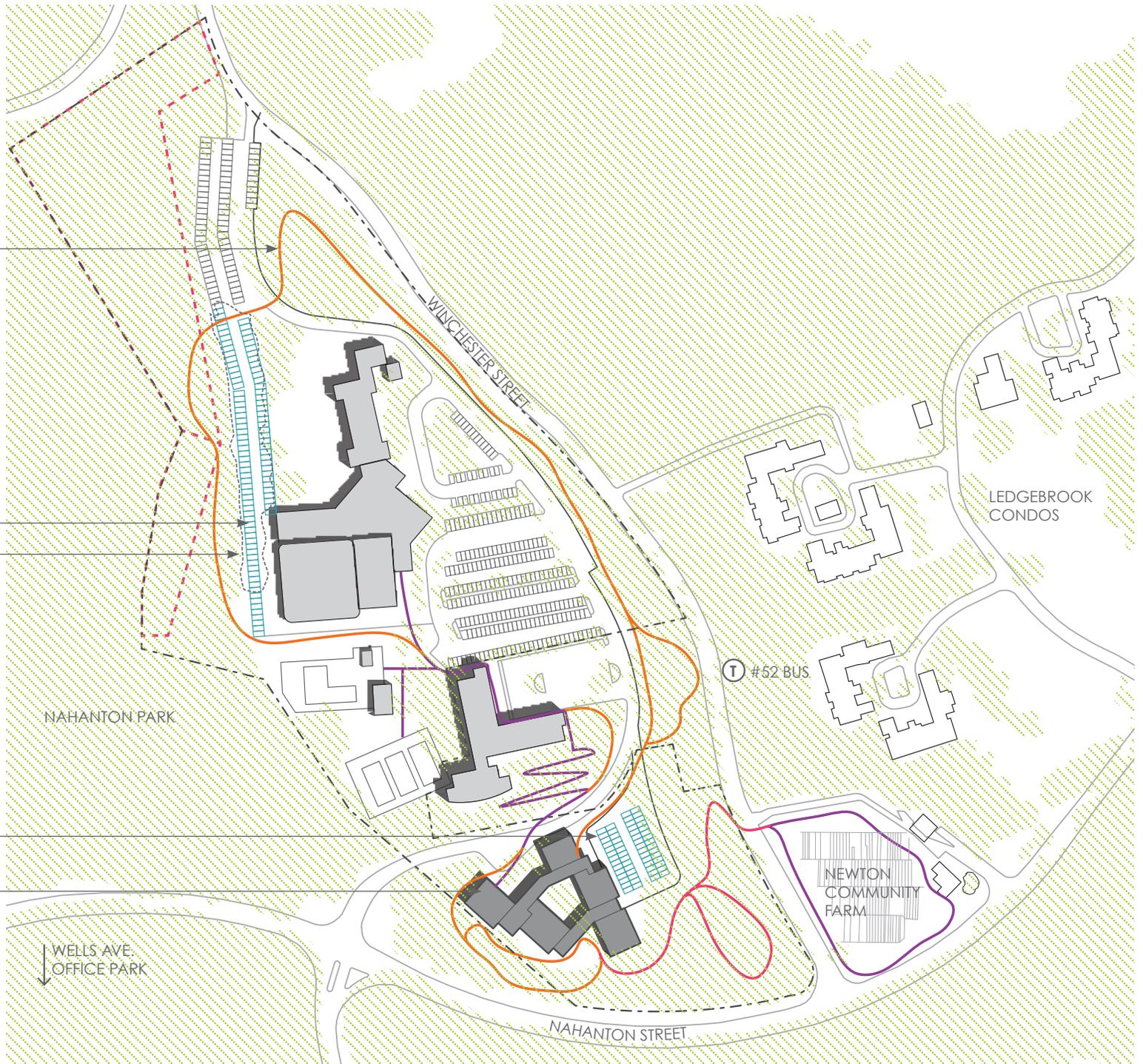
	590
Net Gain	50

New Surface Parking

Trees to be Removed

New Surface Parking

Proposed Zakim House



AN ACTIVE COMMUNITY

By designing both the site and building with a variety of circulation paths, residents are afforded myriad options when moving around the project. The variation in material, elevation, and length of paths offer selection and exercise on a daily basis.

The typical characteristics of these circulation paths are detailed here, both in the building and the campus landscape at large.

Easy Paths

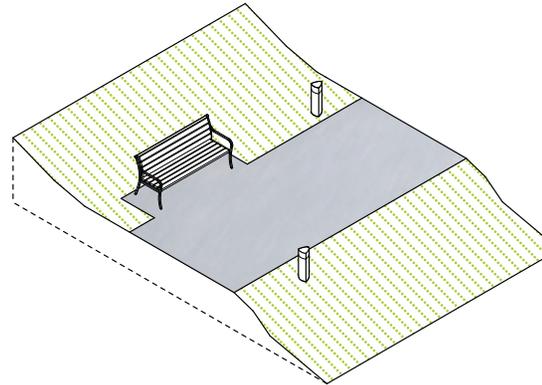
Landscape

- Smooth paving surface
- No more than 1:20 slope
- Well lit
- Numerous resting areas

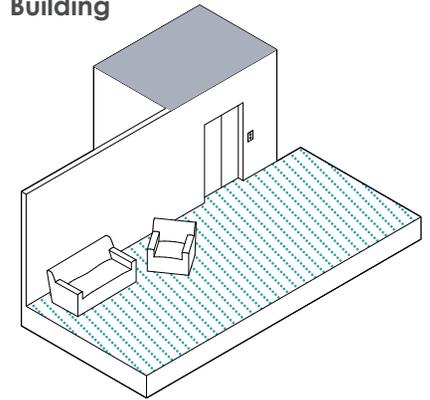
Building

- All levels and garage accessed via elevator
- All elevators open onto communal spaces
- Numerous resting areas

Landscape



Building



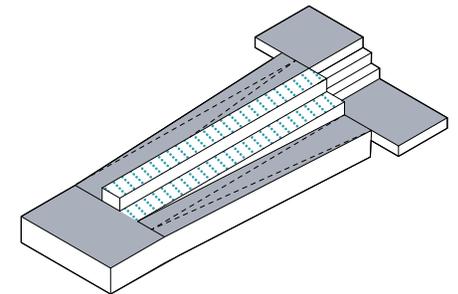
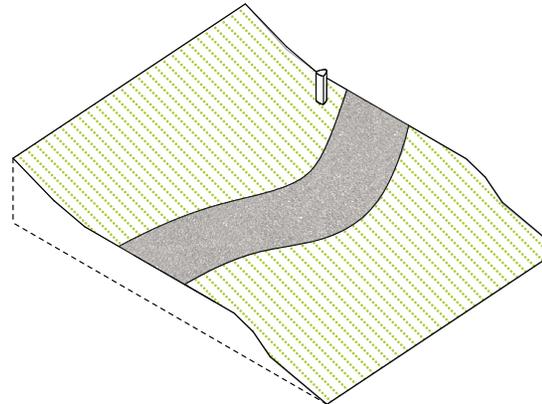
Moderate Paths

Landscape

- Crushed stone walking surface
- Average a 1:12 slope
- Limited lighting
- Limited resting areas

Building

- Ramps and paths allow for quick connections between buildings
- Ramps have built-in seating and intermediate resting spaces



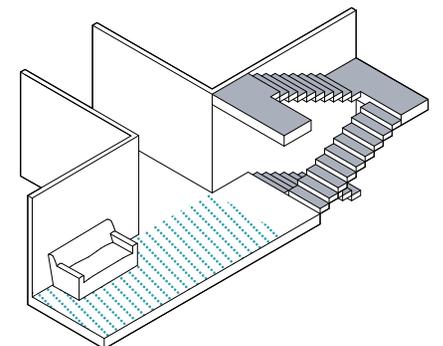
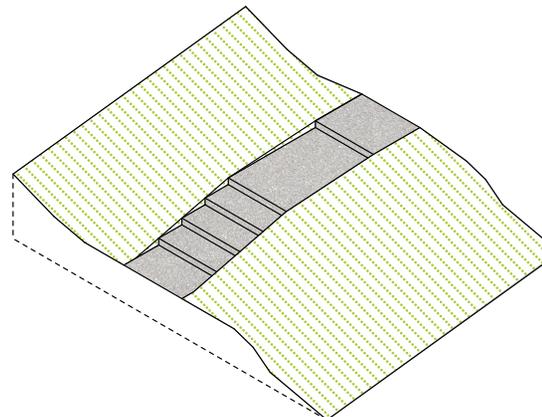
Challenging Paths

Landscape

- Crushed stone walking surface
- Mixture of slope and steps
- Limited to no artificial lighting
- Limited resting areas

Building

- The intention is to promote stair use by making them desirable spaces
- Most stairs are placed on outside corners to maximize the available natural light
- Each stair opens onto a resting / amenity area



SITE STRATEGY

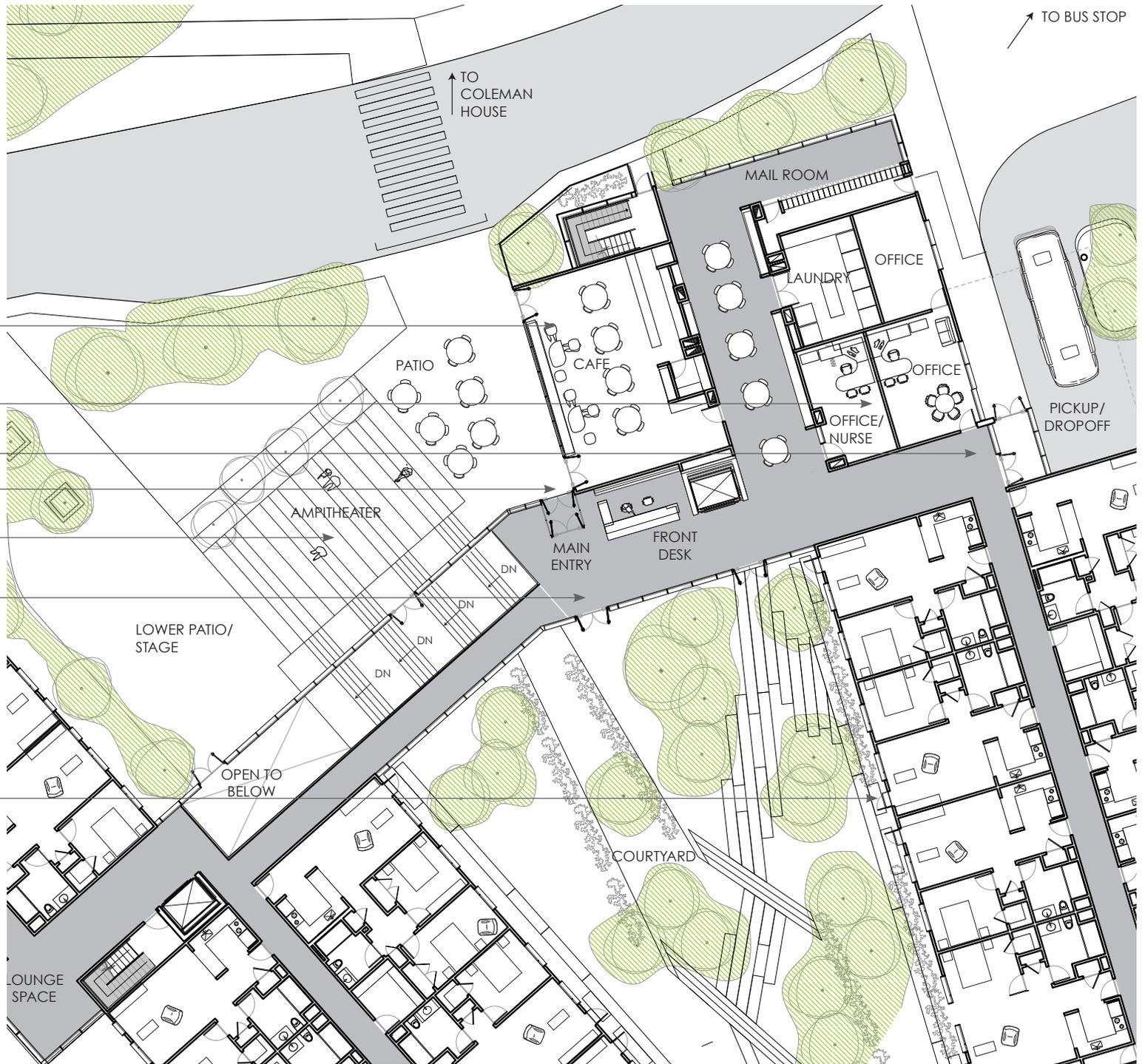
- New surface parking for 58 spots
- Second entrance at drop-off and parking lot side
- Outdoor amphitheater creates a benefit from extreme grade and provides a generous amenity to residents and community center
- Building is designed to preserve and highlight existing tree grove
- Entrance to below grade parking, housing 46 spots, takes advantage of sloping landscape
- Southern end of courtyard extends into existing landscape



Proposed Level 1 Plan
Entry and Common Space

BUILDING ENTRY

- Centrally located laundry and mail rooms to encourage community
- Offices and part-time nurse's station for third-party nurse
- Entry from Dropoff and Parking lot
- Entry from Coleman House
- Hybrid circulation ramps and amphitheater seating
- Courtyard is accessible both from main entry level and at the lower base of the amphitheater
- Courtyard units include exterior door to courtyard per JCHE's request



DESIGN APPROACH

The project can be understood at 3 scales of relationships: building and nature, building and site, and building and user.

Building and Nature

Taking advantage of its natural surroundings, the building makes use of the topographical, climatic, and vegetation conditions as the main guidelines for the massing and orientation of the project.

Two efficient bar buildings are set on the open land on-site and separated by an existing tree grove. The bars are oriented north-south in their long dimension in order to offer the maximum amount of light to all units. The existing grade change creates a stepped development which reduces the scale of the buildings and facilitates rain water collection. The bars are also "sliced" and the pieces are displaced in order to open communal and circulation spaces to natural light and ventilation. Finally, the bars are set on the existing parking lot demanding minimum tree removal.

Building and Site

The different buildings and uses are woven together through landscaped trails which offer the possibility of engaging with the surrounding forests in which the project is set, while adding to JCHE's outdoor programming.

Aware of this potential for congregation and interaction, the building creates an urban front which takes advantage of the grade change and offers a public plaza / auditorium which can be programmed to have multiple activities for residents. While attracting non-resident users who may be visiting Coleman or the JCC. Internally, the creation of a vegetated courtyard offers the residents a controlled exterior space which can be used individually or in a more programmed manner. The courtyard brings light in to the project and fosters cross ventilation of the communal spaces.

Building and User

The building promotes mobility and interaction at different levels and scales. In order to do so the communal spaces are broken up and spread throughout the entire building mixing corridors with communal activities. This creates an environment in order to reach the units it is always necessary to pass through a communal space. The entrance is adjacent to the administration offices, café, mail room, and laundry room generating a node of loose social activities next to the plaza/auditorium.

The unit mix offers studios, 1BR, and 2BR units. The studios are clustered together in order to be able to offer specific and cost-effective living arrangements to residents with special needs. Each "building slice" has a vertical circulation node which creates needed redundancy. The vertical circulations also include trash shoots which facilitate both life for the residents as well as the management of the building. Each floor is color labeled in order to offer the residents with memory problems additional elements to remember routes and end points. Finally, by slicing the building we are creating discontinuity in navigating the building which is beneficial for exercising the memory of the residents, and also serves as reference points for residents losing their sight and hearing by creating different environments which can be perceived experientially and therefore become references for navigating the project as the residents age.



North - South Section

Breaking up the building into "neighborhood clusters" can be an effective strategy when dealing with resident populations coping with memory or early stage dementia. This building layout therefor can allow for residents to age in-place and can better adapt to their needs over time.

TYPICAL PLAN

Building offsets are strategically placed to allow for both natural light within the corridors but also allow for a "neighborhood" cluster of units.

Vertical circulation components are strategically located across the plan, with stairs at the end and middle of each bar and elevators within the middle of each bar. All elevators and most stairs also open onto more social and amenity spaces.

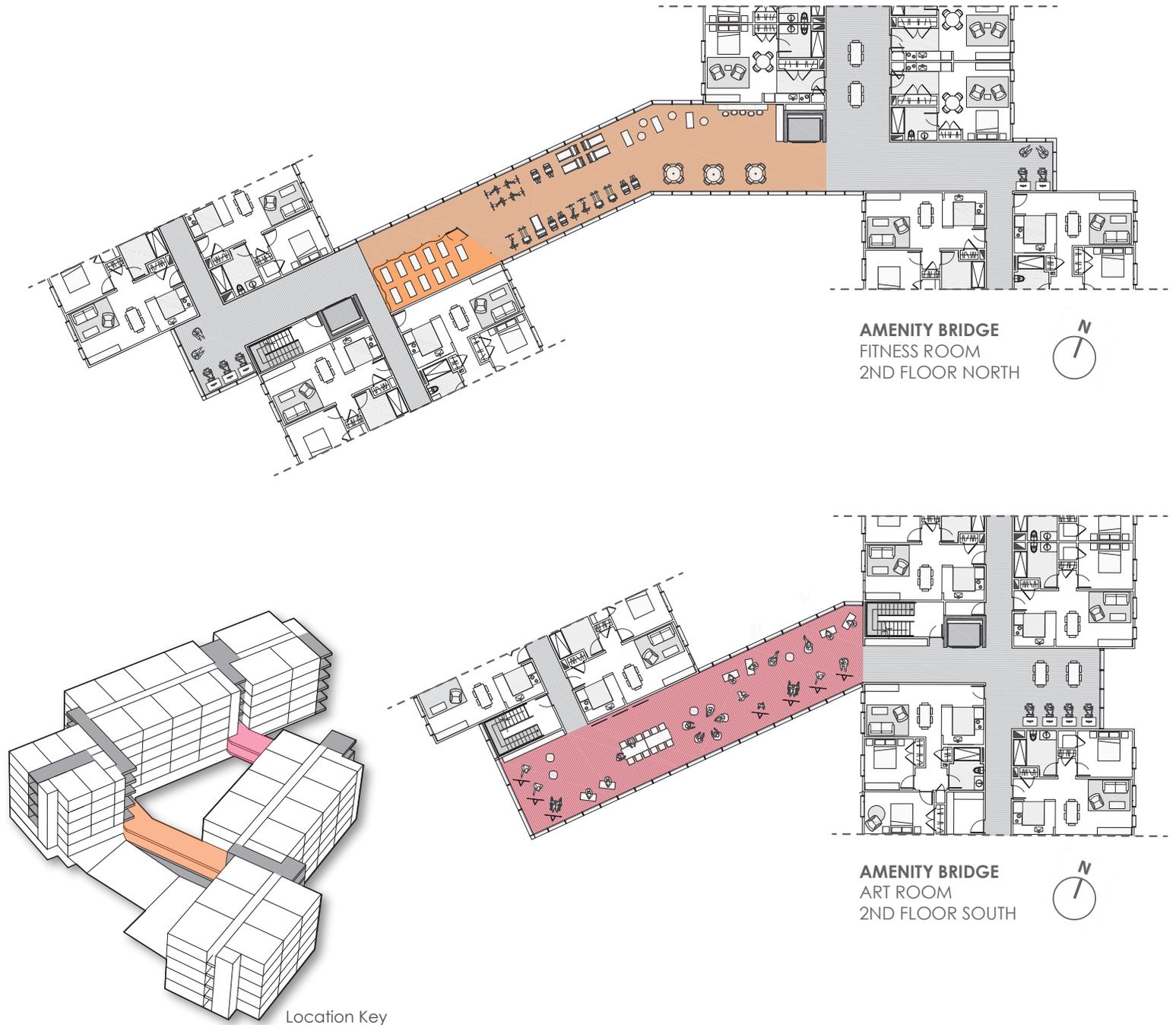


THE BRIDGES

To help promote mobility between buildings, especially during the most intense periods of summer or winter, the two bar buildings are connected with two "bridges".

Each bridge effectively acts as a corridor and enables social activity. The North Bridge doubles as a fitness space while the South Bridge can double as an art studio. These programs were specifically chosen based on the success of similar spaces at JCHE's other facilities.

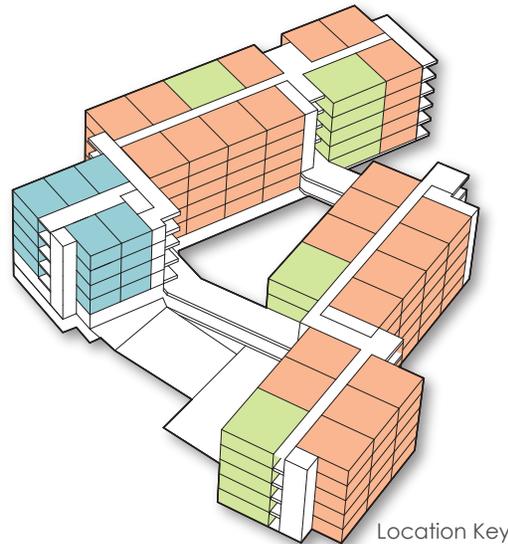
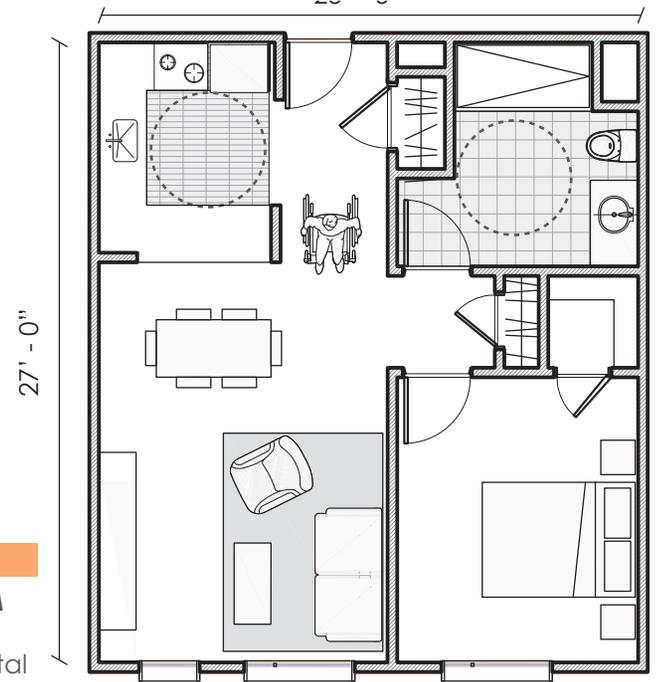
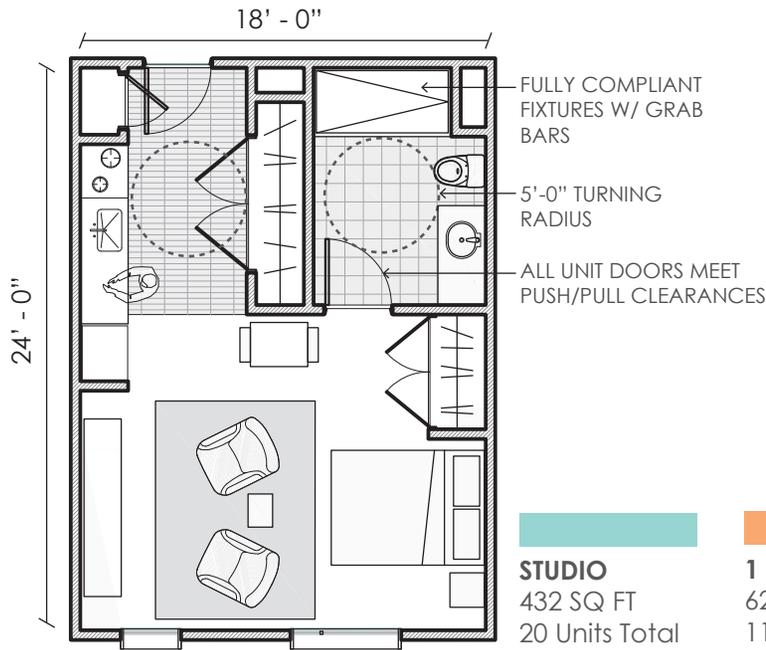
The transparency of each bridge allows for both views and light through the corridor but also to the courtyard. The net effect is one of feeling half inside and half outside when in the courtyard and half outside when in either of the bridge spaces.



UNIT OPTIONS

Per the Fair Housing Act, multi-family housing must meet either Type A or Type B accessibility requirements. Type-A units require full compliance with all accessibility codes at the completion of construction, while Type-B units are designed to be upgradable to full compliance at a later date.

At least 15 of the Zakim House units will be Type-A compliant and the remainder will be Type-B.



THE BUILDING AND LANDSCAPE



Every room in Zakim House has a direct view of mature landscape either to the courtyard or existing forest.



Building is designed around an existing mature tree grove. Native birds and wildlife will be attracted to the native fauna.

Terraced courtyard provides access from multiple levels and active physical stimulation for residents. The slope is also used to collect rainwater which is stored in an onsite cistern for grey-water uses.

Underground parking is accessible without significant excavation by utilizing the naturally steep grade.

Parking lot takes advantage of existing level grade. 50% of underground garage is open for natural ventilation, eliminating the necessity for mechanical ventilation

SUSTAINABLE STRATEGIES

The Zakim House will uphold the same standards for sustainable and innovative design that JCHE maintains across their buildings, striving for healthy and efficient developments. As energy efficiency is typically the largest variable operating cost for affordable multifamily housing, a series of thoughtful design choices and systems enable the Zakim House to perform efficiently. The development utilizes Enterprise Green Building standards as a baseline from which to guide design and assess performance.

The steps taken simultaneously reduce the building's environmental impact, produce cost savings for JCHE, and bring awareness to the importance of sustainability measures for multifamily affordable housing. Energy efficiency for elderly housing is especially necessary to ensure a healthy and comfortable environment for residents who may be more sensitive to indoor temperatures, humidity, or drafts. The following series of design strategies work together to create a high-performing, efficient, and comfortable development.

UNIT

EnergyStar and Water Sense Appliances

EnergyStar appliances and Water-Sense appliances insure maximum energy conservation, including energy efficient full-sized stoves, dishwashers and refrigerators / freezers. Water conservation is insured through the installation of low flow faucet and shower-heads.

Insulation and Ventilation

The well-insulated building will ensure that units will be comfortable all year long while the central ventilation system provides consistent fresh air flow into the individual apartments.

Windows and Illumination

Easy to open windows bring natural light into the units and insure natural daylighting in all hallways. High efficiency lighting is used throughout the building and the grounds to complement natural light provided by windows and building corridors.

BUILDING

High Performance Building Envelope and Passive Systems

A tightly insulated building envelope, made possible through highly efficient wall and roof assemblies, keeps energy costs low all year long, whether during cold New England winters or warmer summer months. An underground garage with 50% open air reduces the costs of mechanical ventilation.

Cogeneration system

The building's cogeneration system creates an onsite integrated energy system, particularly suitable for a large scale multi-family housing development. Cogeneration enables the building to operate independently and efficiently, reducing reliance on the energy grid while minimizing air pollution and greenhouse gas emissions. We anticipate this reducing

223.78 metric tons of CO₂ annually from electric and natural gas savings.

Solar Power and Orientation

Photovoltaic panels are implemented during the construction phase and located on the roof to take advantage of the development's size and allow the building to draw upon solar energy to generate electricity. Strategic solar orientation allows for south light for the courtyard while tall trees surrounding the development help protect south and west elevations. Solar panels across the project's 28,470 SF roof are anticipated to generate 503,000 kWh annually, reducing grid demand by 54.56% and saving 195 metric tons of CO₂ annually.

Rainwater Cistern for Non-potable Water

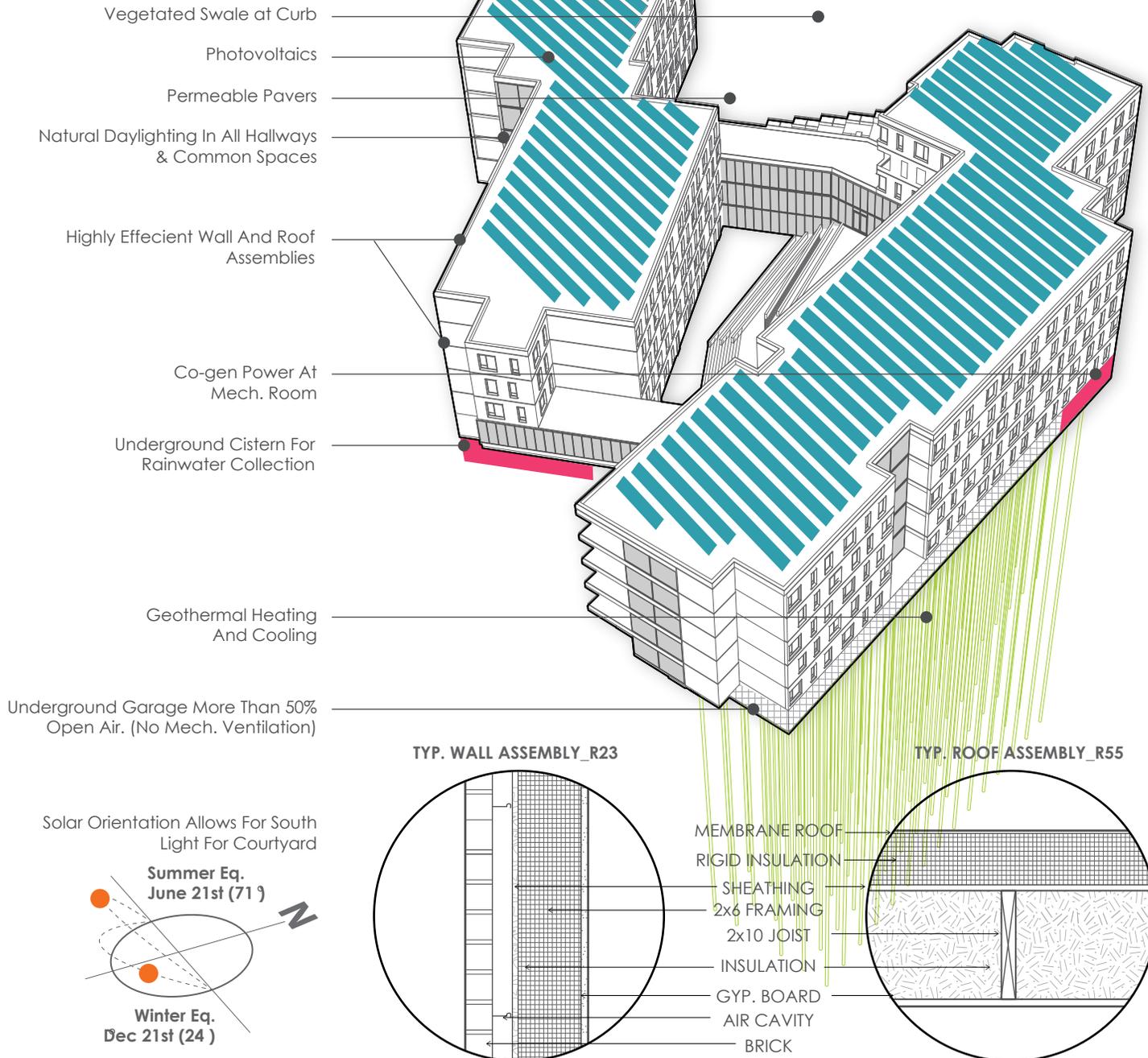
An underground water rainwater cistern captures and utilize rainwater for non-potable uses, reducing the facility's reliance on Newton's water utilities. Captured water can be utilized for landscaping the campus during drier summer months.

CAMPUS

Geothermal Heating and Cooling

Geothermal heating and cooling, extending 200 feet underground, is used to efficiently and effectively heat and cool the building. The geothermal system minimizes the emission of fossil fuels and utilizes small amounts of electricity to enable the

Building Level Sustainable Strategies



system to run. The 202 heat pumps sited on the campus are anticipated to save 13,045 cubic feet of natural gas annually.

Energy management system

The WeGoWise energy management and utility tracking system integrates the Zakim House into the existing network of JCHE buildings to consistently maximize and evaluate performance. On-site and administrative staff are familiar with the process and comfortable with the reporting system.

Permeable paving + vegetated swales

Landscaping uses flora that is local to the area and integrates well into the existing wooded site. Permeated paving ensures that new paths implemented on site are integrated into the site's slope. Paving and swales ensure that the velocity of stormwater runoff is reduced.

Smart Growth

Through Smart Growth strategies and strategic densification of the site, the Zakim House maximizes existing shared transportation resources, including an additional JCHE shuttle, a shared shuttle with the office park, connections to the public transportation nearby, and the inclusion of ZipCars at Zakim House. With the addition of public facilities such as walking paths, a cafe, and a convenience store, the campus begins to realize a "village style" development.

ENVIRONMENTAL PERFORMANCE

Enterprise Green Communities Checklist

1: Integrative Design

- 1.1a Green Development Plan: Interactive Design Meeting(s)
- 1.1b Green Development Plan: Criteria Documentation
- ② 1.2a Universal Design

2: Location + Neighborhood Fabric

- 2.1 Sensitive Site Protection
- 2.2 Connections to Existing Development and Infrastructure
- 2.3 Compact Development (Suburban)
- 2.5 Proximity to Services (Suburban)
- ② 2.7 Preservation of and Access to Open Space
- ④ 2.8 Access to Public Transportation (Suburban)
- ④ 2.10 Smart Site Location: Passive Solar Heating/Cooling
- ④ 2.12 Access to Fresh, Local Foods

3: Site Improvements

- 3.1 Environmental Remediation
- 3.2 Erosion and Sedimentation Control
- 3.3 Low-Impact Development
- 3.4 Landscaping
- 3.5 Efficient Irrigation and Water Reuse
- ③ 3.6 Surface Stormwater Management

4: Water Conservation

- 4.1 Water-Conserving Fixtures
- ④ 4.2 Advanced Water-Conserving Appliances and Fixtures
- ③ 4.3 Water Reuse

5: Energy Efficiency

- 5.1 a-d Building Performance Standard
- ⑩ 5.2 Additional Reductions in Energy Use
- 5.3 Sizing of Heating and Cooling Equipment
- 5.4 ENERGY STAR Appliances
- 5.5a-b Efficient Lighting
- 5.6a Electricity Meter
- ⑩ 5.7a Renewable Energy
- ② 5.7b Photovoltaic/Solar Hot Water Ready
- ⑤ 5.8 Advanced Metering Infrastructure

6: Materials Beneficial To The Environment

- 6.1 Low/NO VOC Paints and Primers
- 6.2 Low/No VOC Adhesives and Sealants
- 6.3 Construction Waste Management
- ② 6.6 Recycled Content Material
- ⑤ 6.7 Regional Material Selection
- ① 6.9a Reduced Heat-Island Effect: Roofing
- ① 6.9b Reduced Heat-Island Effect: Paving

7: Healthy Living Environment

- 7.1 Composite Wood Products that Emit Low/No Formaldehyde
- 7.2 Environmentally Preferable Flooring
- 7.4a Exhaust Fans: Bathroom
- 7.5a Exhaust Fans: Kitchen
- 7.6a Ventilation
- 7.7 Clothes Dryer Exhaust
- 7.8 Combustion Equipment
- 7.9a Mold Prevention: Water Heaters
- 7.9b Mold Prevention: Surfaces
- 7.9c Mold Prevention: Tub and Shower Enclosures
- 7.10 Vapor Barrier Strategies
- 7.11 Radon Mitigation
- 7.12 Water Drainage
- 7.13 Garage Isolation
- 7.14 Integrated Pest Management
- 7.15 Lead-Safe Work Practices
- ⑦ 7.16 Smoke-Free Building

8: Operations + Maintenance

- 8.1 Building Maintenance Manual
- 8.2 Resident Manual
- 8.3 Resident and Property Manager Orientation

Total Optional Points: 76

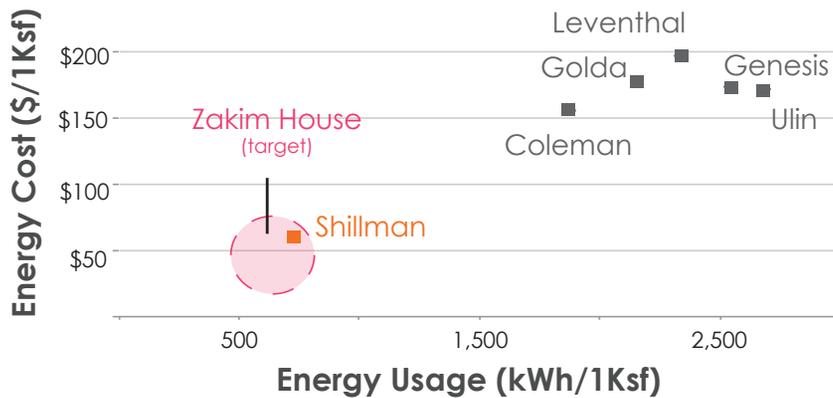
Mandatory ■

To achieve Enterprise Green Communities Certification, our project complies with the mandatory criteria measures and achieves over 35 optional points required for new construction projects.

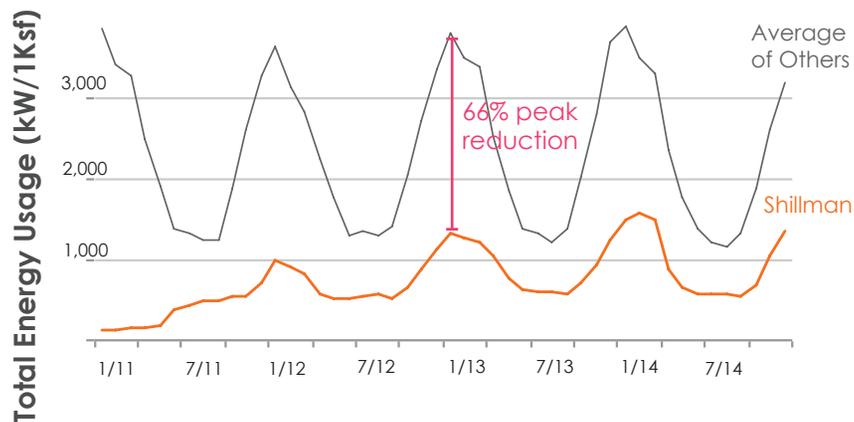
Energy Benchmarking

By integrating energy-saving features from the ground up, JCHE has been able to obtain dramatic energy and cost savings at Shillman House, completed in 2011. Using similar strategies and thoughtful design, Zakim House will continue this trend towards energy efficiency.

Monthly Energy Usage & Cost at JCHE Developments 2011-2014



Seasonal Energy Usage at JCHE Developments 2011-2014



The Green Bottom Line

Solar Power

	Annual Demand (kWh/unit)	# Units
Studio	3,012	20
1BR	3,940	110
2BR	5,209	20
Common Spaces	301,757	N/A
Commercial Space	10,103	N/A
Total Energy Demand	909,679	

Roof Area (sf)	28,470
Generation Efficiency (kW/sf)	0.012
Generation Capacity (kW)	345
Average Daily Insolation (hr)	4
Annual Generation (kWh)	503,000

Grid Electricity Cost (\$/kW)	\$0.149
Annual Grid Cost (w/o Solar)	\$135,633
Total Grid Cost After Solar	\$60,636
Annual Electricity Bill Savings	\$74,997
SREC ii Syndication	\$66,940
Total Annual Savings	\$141,937

Total Installation Costs	\$1,664,143
Payback Period (years)	11.72

CO₂ reduction (metric tons)	195
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Geothermal Heating/Cooling

Annual Natural Gas Savings (Mcf)	13,045
Annual Cost Savings	\$71,746

Installation Cost	\$862,581
Payback Period (years)	12.02

Permeable Pavement

Area (sf)	59,600
Runoff Reduction	57%
Annual Rainfall (ft)	3.94
Ann. Runoff Reduction (ft³)	133,765

Cogeneration System

Annual Electricity Savings (kWh)	504
Annual Natural Gas Savings (Mcf)	4,110
Electricity Savings	\$75
Natural Gas Savings	\$22,605
CHP Program Reimbursement	\$31,500
Total Annual Savings	\$22,605

Installation Cost	\$505,000
Payback Period (years)	9.32

CO₂ reduction (metric tons)	224
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By generating energy on site and employing efficient technologies, Zakim House significantly reduces operating costs in the long run and minimizes environmental impact.



PROGRAMMING

DAY IN THE LIFE

PROGRAMS & RESOURCES

MOBILITY OPTIONS

BRINGING PEOPLE IN

- Resident
- Staff member
- Community

AM

9am / **Art**
Ellen starts her day painting the landscape outside her window.



10am / **Aerobics**
She then joins some friends for an aerobics class.



11am / **Cafe**
Ellen meets up with three friends at the cafe, where they eat, sip tea, and chat.

PM

12:30pm / **Terrace**
Ellen makes her way up to Coleman House, and spends some time in the garden along the way.



1pm / **Cards**
The Resident Coordinator has organized a weekly reading group, followed by a round of bridge.



2:30pm / **Tutoring**
Twice a week, Ellen tutors a 5th grader at the JCC.



4pm / **Walk**
Ellen and her co-tutor, Sue, walk along the shady trail back to Zakim.

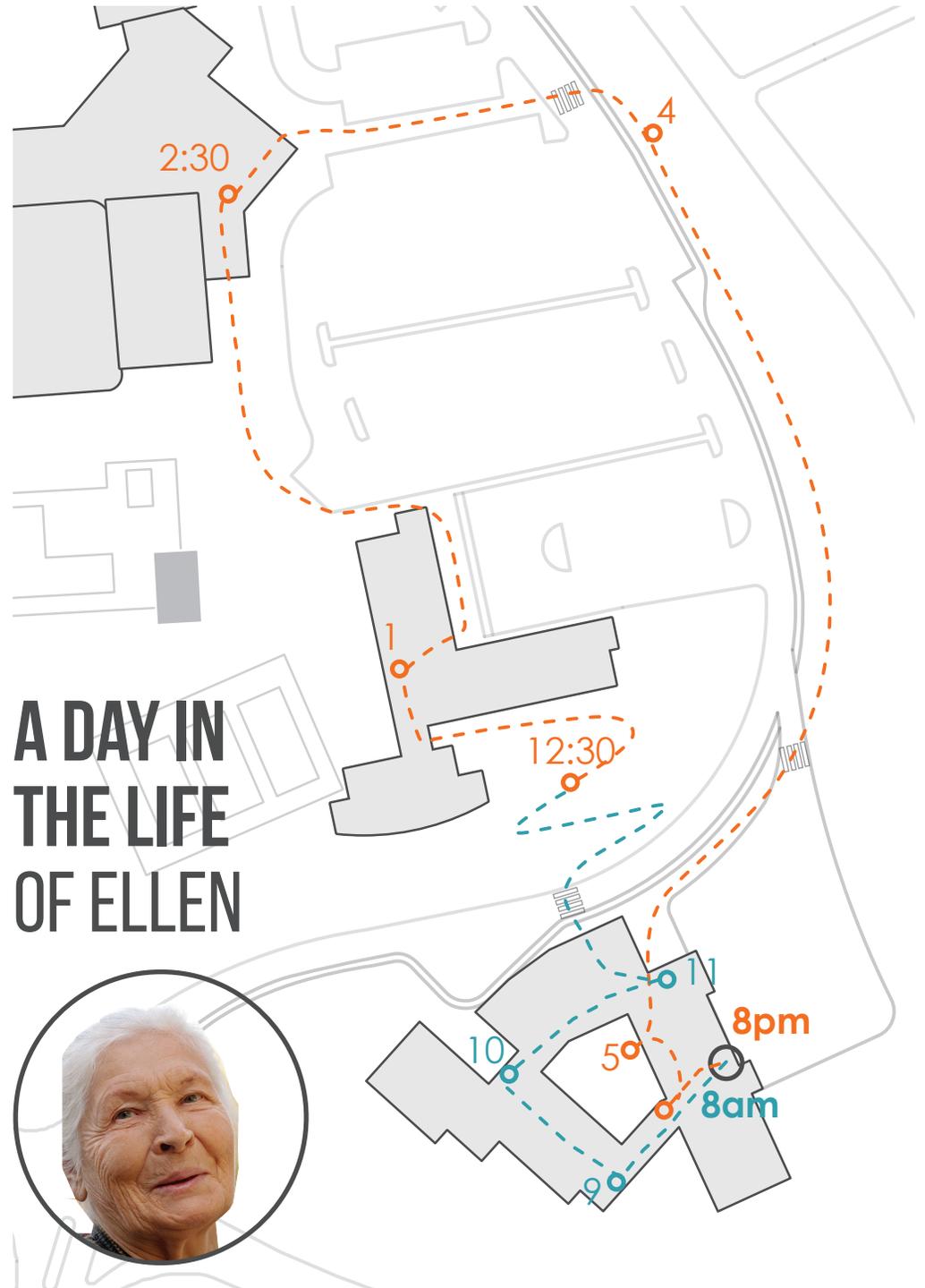


5pm / **Mail room, courtyard**
They stop by the mail room, which is packed in the late afternoon. She checks in with the health care aid to ask about her medication. Ellen then heads to the courtyard.

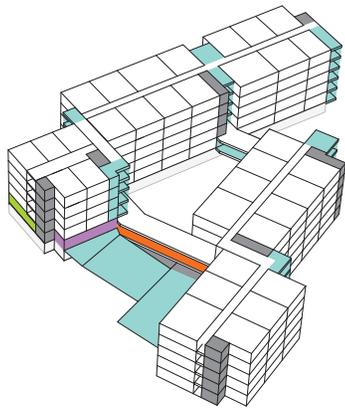


6pm / **Common area**
From the courtyard, Ellen sees June sitting in the corridor above and walks up to join her. She uses her iPad to email, check Facebook, and watches the sun set.

A DAY IN THE LIFE OF ELLEN



PROGRAMS & RESOURCES



CULTURAL PROGRAMING

Reflecting residents' diversity, JCHE communities have hosted everything from klezmer concerts to traditional Chinese dances, podcast discussion groups to science lectures, and Lunar New Year and Passover celebrations. At Zakim House, the cultural offerings will be particularly extensive, as residents will have access to all events at both Zakim and Coleman Houses, as well as many events at the JCC.

FITNESS

Staying physically active is key to getting the most out of life. Zakim House will feature visiting fitness instructors to teach classes such as chair aerobics, expressive movement, Tai Chi, and yoga. These formal classes are in addition to the many casual opportunities residents will have for activity, from a walk around one of the Gosman Campus's trails of varying difficulty, to senior-friendly exercise equipment in the common spaces. As in other developments, the RSC can even form a mutual partnership with a medical or physical therapy school that would benefit both residents and students.

MEDICAL SERVICES

While Zakim House is an independent living facility, a Resident Services Coordinator (RSC) will help tenants access medical services off-site, as well as from providers that can use the flexible medical care room on site. As at Coleman House, in-home services would be provided by Springwell, Newton's Aging Services Access Point.

MANAGEMENT

A Resident Services Coordinator (RSC) helps enrich JCHE residents' lives through creative programming. While the RSC arranges many activities, one of their most important jobs is to empower residents to form groups, volunteer, and lead activities themselves.

COLEMAN	<ul style="list-style-type: none"> • Maintenance • Assistant Services • Coordinator
SHARED	<ul style="list-style-type: none"> • Executive Director • Resident Services Coordinator • Maintenance • Site Reps
ZAKIM	<ul style="list-style-type: none"> • Maintenance • Assistant Services • Coordinator

EXTRA SUPPORTIVE SERVICES

Some Zakim House residents will require an extra level of on-site care beyond with the JCHE RSC can provide. Fifteen units at Zakim are reserved for individuals with developmental disabilities, who will live in clusters of studios with extra shared living space. Jewish Family & Children's Service (JC&FS), a service provider that works with over 17,000 clients across Massachusetts each year, will provide the extra assistance with daily activities like cooking, cleaning, and healthcare coordination.

Additionally, 15 units at Zakim will be designated for formerly homeless individuals, who may face a host of challenges to wellbeing even after Zakim provides them with a permanent home. Hearth, Inc. will be the service provider to help residents overcome these challenges through dedicated counseling and support. JC&FS and Hearth, with whom JCHE is already working on a forthcoming new development in Brighton, will also be responsible for the intake process for the respective populations they serve.

MOBILITY OPTIONS

“A fifteen minute doctor’s visit can take all day with travel, and can be exhausting for a resident. Mobility is a major issue.”

- Cindy, Coleman House Staff Member

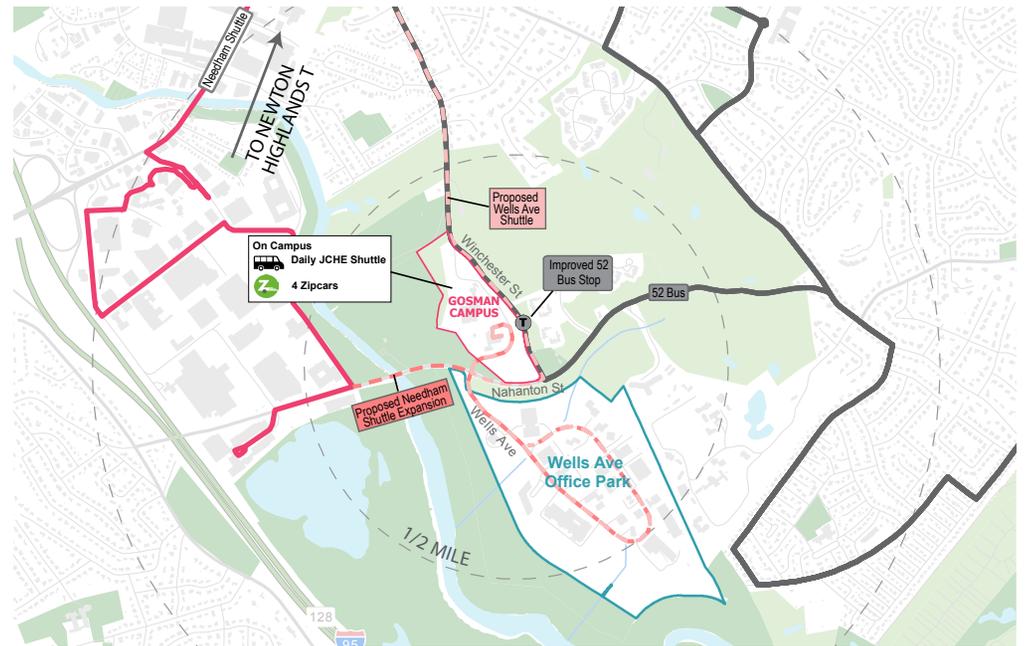
While a strong network of services and programs are available on the Gosman campus, improved access to transportation will allow residents to reach services and enjoy amenities in the greater Newton area. This access is key to our goals of mobility and independence - residents should be able to visit the doctor, pick up groceries, and visit a museum or see a performance with ease.

MBTA BUS

The MBTA 52 bus stops on Winchester Street, immediately adjacent to the Gosman Campus. However, the path leading from the campus to the bus stop is not accessible for wheelchairs or walkers, and the northbound stop is across 2 lanes of traffic with low visibility and an out-of-the-way crosswalk. As part of the larger campus plan, this connection could be made safer and more accessible by adding a ramp, a striped crosswalk, a blinking pedestrian yield sign, and a covered bus stop shelter.

JCHE SHUTTLE

JCHE currently owns a single donated shuttle, which serves residents at all 6 developments. This means that Coleman House shuttle service is limited to only two days a week. Trips are often to shopping areas, museums, or other entertainment, and Coleman residents expressed a strong interest in increased frequency. With another 58 units under development in Brighton in addition to the Zakim House, JCHE will be able to support another shuttle and provide the roughly 400 total residents



on the Gosman Campus with daily service.

SHARED SHUTTLES

Wells Avenue Office Park, just across Nahanton Street from the Gosman Campus, has great potential as an economic engine for Newton, but a lack of direct transit access limits its attractiveness to many employers. The City may be sympathetic to requests for a shuttle given local interest in maintaining robust economic growth. The timing is particularly apt given the recently heightened competition between Newton and neighboring Needham, which just recruited TripAdvisor, Newton's former largest employer. Despite the fact that Wells Avenue Office Park doesn't have a single owner, coordination with a city economic development

representative and office park tenants could generate necessary support.

A shuttle connecting the Gosman Campus and the Wells Avenue Office Park to the Newton Highlands Green Line station could be achieved in one of two ways. Preferably, a shuttle would offer express service up Winchester Street. Alternatively, the two stops could be added to the existing Needham Shuttle run by the Route 128 Business Council, which currently passes less than a half-mile from the Gosman Campus.

ZIPCAR

Seniors who are able to drive safely but cannot afford - or simply are not interested in - owning a car are able to use one of four on-site ZipCars with dedicated parking spaces.

BRINGING PEOPLE IN

A VILLAGE SQUARE

Comprised of the Jewish Community Center and the Coleman House, the Gosman campus has great potential for further community activity and connectivity. Though the site is currently home to nearly 200 and visited by another 45,000 JCC users every month, it nonetheless functions more as two distinct buildings rather than as a true campus. Unlike JCHE residences in more urban settings, residents at the Coleman House typically need to leave campus for the sort of casual interactions one might expect on a neighborhood corner or commercial street. To address the campus' great potential for vibrancy, the Zakim House will open up the site by creating a new permanent cafe and convenience store and by accommodating seasonal outdoor uses such as a farmer's market. Through more formal additions, the development aims to create more opportunities for comfortable and informal interactions for residents and their Newton neighbors.

A SIP OR A NOSH

Currently, there is no year-round dedicated food or beverage service anywhere on the Gosman campus. Although both the JCC and the Coleman House have experimented with limited food service options in the past, these efforts were constrained by facilities that were ill-equipped for food service, a lack of visibility, and high costs for commercial tenants given a limited schedule. As the Zakim House will double the campus'

resident population to around 400, a unique opportunity presents itself to serve a captive market. JCHE would seek a cafe tenant to serve reasonably priced coffee, espresso, smoothies, and other beverages, as well as locally baked pastries and fresh salads and sandwiches. In order to ensure that the commercial uses further JCHE's mission, rents will be set well below market rate. Building in this lower rate reduces risk for JCHE in financing the development and provides an opportunity for a local small business to serve the campus. The cafe would become another social space for campus residents, while also attracting parents dropping off or picking up children from the JCC preschool, JCC fitness club members, or any of the hundreds of employees working at Wells Avenue Office Park just across Nahanton Street.

COMMUNITY CONVENIENCE

The Coleman House currently has a small convenience store in which residents can buy dry goods and essential refrigerated items at reasonable prices. While this small store is beneficial and greatly enjoyed by current residents, it is not accessible to the public. Given the relative inaccessibility of the closest grocery store (Baza Foods, 2 miles away), the existing store would not be able to support the needs of additional Zakim House residents. A new convenience store, accessible both from within the Gosman campus as well as to broader community members, could serve the basic needs of the building's residents while also bringing in JCC users and

Wells Avenue Office Park workers, thus enlivening the campus while serving the community. With a larger customer base, the Zakim House store would be able to have a wider offering of fresh produce and prepared foods than the Coleman House store currently offers.

SEASONAL POP-UPS

The Newton Community Farm is located just across Winchester Street from the Zakim House. As the city's last farm, the farm is now a nonprofit organization producing food for donation and sale and educating the public about sustainable agricultural techniques. During the summer months, the farm sells at the Newton Farmer's Market (approximately 5 miles away) and hosts a farm stand on Winchester Street, several blocks from Zakim House. The current farm stand site is difficult to access, as it resides on a busy street with no shoulder. To complement the permanent convenience store, the Zakim House entry plaza could logically host a seasonal farmer's market with produce from Newton Community Farm and farms from throughout New England. Outdoor entertainment could create a festival atmosphere on summer weekends. This aligns well with the increased number of visitors to the JCC outdoor pool during the summer months. The market would still be close enough to the Community Farm for visitors to walk through the campus' new pathways and visit the farm. Additional community-focused seasonal and pop-up uses can take place throughout the year.





FINANCIALS & IMPLEMENTATION

SOURCES OF FUNDS

HEALTHCARE & HOUSING FINANCE

OPERATIONS

PRO FORMA

TIMELINE

SOURCES OF FUNDS

A NOTE FOR RESIDENTS

The entrance deposits for moderate-income and market units represent a way for residents to lock in a unit at Zakim House pre-construction. Given the years-long waitlists at other JCHE developments, this may be an attractive option for aging boomers and seniors who are anticipating the need to downsize their housing and move into a supportive community. The ability to lock in a unit gives potential residents greater predictability in knowing when it will be time to dispose of their current real estate assets and to move.

In addition, the deposits represent a way for potential residents to diversify their assets. JCHE would hold the funds in escrow, with residents able to draw on funds for monthly rent payments should the need arise, and refund them at the 90% rate of remaining funds upon death (paid to designated heirs) or move-out.

The entrance deposits paid to JCHE are not like the buy-in required by CCRCs, which have been subject to some controversy. CCRCs generally use entrance fees to subsidize the costs of long-term care, which exposes the CCRCs to inflation risk and actuarial risk. JCHE would only be using the funds to support the construction loan.

PRIVATE EQUITY

JCHE Equity and Development Fees
JCHE anticipates putting a small amount of equity from their Weinberg foundation into the project. Of the \$1,000,000, \$533,925 will go towards the residential units and \$466,075 will be used as equity to construct the commercial space in the Zakim House.

Membership Units

Following an innovative and growing trend in senior affordable developments, we anticipate JCHE being able to sell membership units

with annual programming fees for its market rate and 80 - 120% AMI units. These funds will be set aside in escrow with an anticipated 90% recovery rate upon a resident's exit from the property. Middlesex Savings Bank has informed us that approximately 80% of the value of the membership funds can be borrowed against for construction purposes. The entrance deposit will be \$233,672 which will reserve a unit in the development and represents a fraction of the nest egg many seniors have accumulated upon sale of their home. We anticipate these units to raise \$14,253,992 for the

project, which will be available during the pre-leasing phase up to one year before occupancy. Additionally, Chris Lippert at Middlesex Savings bank has expressed confidence in loaning up to 80% the anticipated value of these funds before pre-leasing begins. This deposit is only 75% the average cost of comparable market rate senior living projects in Eastern Massachusetts. This lower membership cost will allow JCHE to provide services to residents, but not need to integrate significantly more programming and services than previous projects.

Sources of Funds - Residential

Private Equity

JCHE Equity (Weinberg Foundation)	\$	539,289	1%
JCHE Membership (75% of market comps)	\$	14,253,992	26%
Deferred Developer Fee	\$	2,218,403	4%

Public Equity

LIHTC - 9%	\$	10,100,000	18%
FHLB Affordable Housing Program Grant	\$	500,000	1%
Community Development Block Grant	\$	475,000	1%
Newton CPA	\$	1,000,000	2%
Newton HOME	\$	260,000	0%
MA HOME	\$	750,000	1%
Community Based Housing (Disability Units)	\$	750,000	1%

Total Equity \$ **30,307,395**

Permanent Debt

Mass Housing Elder Mixed Income Program Loan	\$	9,000,000	16%
MHFA Permanent Loan	\$	16,409,722	29%

Total Debt \$ **25,409,722**

Temporary Construction Debt

Massachusetts Affordable Housing Trust Fund	\$	4,450,000
Middlesex Savings Bank Construction Loan	\$	41,921,718

Total Construction Debt \$ **46,371,718**

Total Sources \$ **55,717,117**

Consolidated Uses of Funds - Residential

Land Costs

Total Land and Acquisition Costs \$ 1,650,000

Hard Costs

Hard Costs \$ 36,372,024
Contingency (8%) \$ 2,182,321
Total Hard Costs \$ **38,554,345**

Soft Costs

Total Soft Costs \$ **9,240,444**
Contingency (5%) \$ 462,022
Total Soft Costs \$ **9,598,048**

Financing Costs

Construction Loan Interest \$ 914,917
Debt Origination Fee \$ 10,000
Total Financing Costs \$ **924,917**

Other Costs

Developer Fee \$ 4,436,807
Capitalized Operating Reserve \$ 250,000
LITHC Syndication \$ 303,000
Total Other Costs \$ **4,989,807**

Total Costs \$ **55,717,117**

SOURCES, CONTINUED

*“If you were a tax credit investor and you had a choice between JCHE and another affordable housing developer — the choice would be clear”
- Edward Marchant*

Capital that JCHE would put into a project as equity will be available so that residents can retrieve their deposit if necessary, mitigating liquidity issues related to membership.

PUBLIC EQUITY AND SOFT DEBT Low Income Housing Tax Credit

60% of units are reserved for tenants with incomes below 60% of the area median income, including 20% of units targeting extremely low income tenants at 30 percent of area median income or below. As a result, 60% of the building is eligible for LIHTC credits. With a very reputable developer and feasible site that benefits local seniors, we anticipate being able to secure 9% credits within a two-year funding cycle (assuming 9% LIHTC credits are oversubscribed in the coming year) and syndicate credits at a 1.01 yield, which JCHE views as likely for this type of project in this type of economic environment. Capped at \$1,000,000 in allocation per year and at a yield of 1.01, syndication is expected to total \$10,100,000 in equity.

Federal Home Loan Bank Affordable Housing Program

This FHLB grant can be used towards units reserved for tenants at 50% the area median income or below. The maximum allocation is \$500,000, which comes out to \$16,129 per ELI unit, seemingly below previous FHLB allocations on a per unit basis.

Newton Community Preservation Grant

Zakim House fulfills many of Newton's CPA program goals, including preserving the openness of 70% of the site, and the creation of new

9% LIHTC Calculations

Basis Calculations: Acquisition and Construction Costs

Total Building Acquisition Cost	\$	1,650,000
Less: Land Cost Component	-\$	1,650,000
Equals: Acquisition Eligible Basis (4% Credit)	\$	-
Total Development Cost (including developer fee and excluding acquisition cost)	\$	45,612,468
Less: Commercial	-\$	331,200
Less: Non-LIHTC Basis Costs	-\$	6,380,433
Less: Grants (must be deducted from LIHTC Basis)	-\$	3,735,000
Equals: Rehab/New Construction Eligible Basis	\$	35,165,834
Eligible Basis after "Boost"	\$	35,165,834
Total Units in Project		150
Number of LIHTC Eligible Units in Project		89
Applicable Fraction		59%
Qualified Basis	\$	20,865,062
Applicable Tax Credit Percentage		7.48%
Maximum Eligible Annual Tax Credit for Rehab/New Construction Acquisition	\$	1,000,000
Sum of Rehab/New Construction and Acquisition Maximum Eligible Annual Tax Credit	\$	1,000,000

Estimating Net LIHTC Syndication Yield

Sum of Rehab/New Construction and Acquisition Maximum Eligible Annual Tax Credit	\$	1,000,000
Maximum Eligible Tax Credit over 10 Years	\$	10,000,000
Estimated Net LIHTC Syndication Yield per Dollar of Total Maximum Eligible Tax Credit	\$	1.01
Net Syndication Yield per LIHTC	\$	10,100,000
Total Development and Acquisition Cost per LIHTC Unit	\$	113,483.15

affordable housing targeting the elderly. In 2015, the city had \$8 million in funds available. We anticipate a grant of \$1,000,000 which is reasonable and may be conservative given JCHE's strong relationship with the town of Newton. This project will create more affordable units in the town than the typical CPA allocation. The subsidy per affordable unit totals \$11,236.

Newton HOME Program

Any DHCD HOME grant must be matched by funds from the WestMetro (Newton) HOME fund. Zakim House fulfills a number of the goals of these funds, including the creation of housing for elderly extremely low income and low income renters, also

available to those with disabilities. We anticipate a project of this scale receiving a maximum grant allocation of \$260,000, which will be matched on a 5-1 basis by the state HOME program. The subsidy per affordable unit is \$2,921 total, below existing funded Newton HOME funded units.

Community Development Block Grants

Newton is allocated \$2.3 million in CDBG funds annually. The city currently rotates \$100,000 in funding between four neighborhoods: Nonantum, Newtonville, Newton Corner, and West Newton. In addition to these neighborhood targets, Newton uses funds on a case by case basis where

Uses of Funds

Total Land and Acquisition Costs \$ **1,650,000**

Hard Costs

Site Work	\$ 1,749,773
Substructure	\$ 492,403
Superstructure	\$ 5,832,602
Exterior	\$ 2,250,976
Windows	\$ 795,461
Roofing	\$ 492,393
Interiors	\$ 4,680,734
Flooring	\$ 873,421
Elevators	\$ 870,496
Plumbing	\$ 2,039,944
Kitchen Fixtures*	\$ 700,425
Bath Fixtures*	\$ 284,312
HVAC	\$ 2,538,199
Fire Protection	\$ 568,624
Electrical	\$ 3,836,688
Laundry	\$ 35,160
Landscaping	\$ 85,000
Parking (structured)	\$ 1,760,000
Parking (outdoor)	\$ 1,312,000
Lobby & Corridors	\$ 1,371,687
Courtyards/Stairs	\$ 400,000
Solar Panels	\$ 1,664,143
Geothermal Heat Pump	\$ 862,581
Co-Generation	\$ 505,000
Permeable Paving	\$ 238,000
Water Cistern	\$ 65,000
Covered Bus Stop	\$ 58,000
Tree Replacement Fee	\$ 9,000
Total Hard Costs	\$ 36,372,024

Soft Costs

Architecture	\$ 1,100,000
General Contractor	\$ 363,720
Surveys & Permitting	\$ 350,000
Legal	\$ 905,000
Title and Recording	\$ 20,000
Accounting	\$ 25,000
Marketing & Rental	\$ 210,000
Real Estate Taxes	\$ 50,000
Insurance	\$ 280,000
Financing Fees	\$ 575,000
Origination Fees	\$ 10,000
Construction Loan Interest	\$ 914,917
Developers Fee	\$ 4,436,807
Total Soft Costs	\$ 9,240,444

Total Development Costs \$ **47,262,468**

* - Indicates Energy Star

51% of the area's households have an income that is 80% or less than the area median income. Newton has six goals for CDBG Funds: 1. Housing Rehabilitation, 2. Housing Development, 3. Human Services, 4. Neighborhood Improvements, 5. Architectural Access, and 6. Economic Development. Since Zakim house is located outside of the target neighborhoods, but has a large affordable density and meets four of Newton's six entitlement goals, we anticipate receiving allocation equivalent to 25% of the fund. This \$475,000 CDBG grant is very conservative for a project of this scale that includes over 60% of units below 60% AMI.

MA HOME Program

Projects receiving HOME grants must have a minimum of 20% of units for residents at 50 percent the local area medium income. With 20% of units targeting residents at 30 percent of the local area medium income we anticipate receiving the maximum allocation grant of \$750,000. These funds will come in the form a 50 year deferred interest free loan. The subsidy per affordable unit total is \$8,427.

Community Based Housing Program

Studios built in the project will be designed specifically for seniors with disabilities. The Community Based Housing Program targets housing development that can integrate persons with disabilities that would otherwise may be institutionalized, including seniors. Although reimbursement rates run higher than \$30,000 per unit, there is a project limit of \$750,000 per unit which we

anticipate receiving based upon the 12 units being created to target this population. These funds will come in the form of a 30-year deferred interest free loan.

Additional Considerations

Additional funding sources were also considered as equity or soft debt sources, including Massachusetts Conservation Energy Grants and New Market Tax Credits. However, the project is not eligible for these programs. Additionally, this project would be eligible for HUD Section 202 monies targeting affordable senior developments. However, congress has not funded this HUD program since 2013 and current requests are held up in congressional committee. Therefore, we chose not to use the HUD Section 202 Program as a funding source due to the high political uncertainty.

PERMANENT LOAN

Mass Housing Elder Mixed Income Program Loan

A permanent loan of \$9,000,000 is expected from the MassHousing Elder Mixed Income Program. This loan amortizes over 40-years and would have an interest rate of 4.5% based upon conversations with local financial experts. The maximum loan can be up to \$10,000,000, but the loan amount was kept below this limit to be conservative, as affordable units are cross-subsidized from other sources which may prevent maximum allocation. Debt service coverage ratios will remain above the 1.15 requirement in all years.

The proposed JCHE project meets the

program requirements for this loan that 20% of the units in the project be available to seniors with 50 percent of the area median income (the remainder of the units can be market rate well above the proposed unit mix of our project). Twenty percent of our units will be designated for extremely low income renters and 40% for low income renters, much greater affordability than required.

MHFA Permanent Loan

The remainder of permanent debt, \$16,967,857 will come from MHFA with a loan that amortizes over 40 years at 5% interest based upon conversations with local financial experts. Debt service coverage ratios will remain above the required 1.15 in all years.

CONSTRUCTION LOANS

Middlesex Savings Bank Loan

We anticipate seeking a construction loan for a total of \$42,479,853 from Middlesex Savings Bank. This senior note will have an interest rate of LIBOR + 250 basis points, currently estimated at 4.0% by Chris Lippert of Middlesex Savings Bank. The note will be paid back with the permanent loans upon completion from MassHousing funds.

Massachusetts Affordable Housing Trust Fund

We anticipate using short-term interest only construction debt from the Massachusetts Affordable Housing Trust Fund. The allocation is \$50,000 per affordable unit which must be repaid upon refinancing, totaling \$4,450,000 for this project. The \$4,450,000 helps to lower the amount of the construction loan needed from Middlesex Savings Bank, de-risking the construction period.

HEALTHCARE & HOUSING FINANCE

"We're willing to experiment by creating mini Social Innovation Bonds through a cluster of ACOs"
- Deborah Goddard,
MassHousing

Healthcare Funding

We did not include any of the following sources in our financial statements, but believe that these are potentially viable funding streams. Through leveraging short- and long-term healthcare cost savings, these sources have potential to increase the replicability of this type of independent elderly development by significantly reducing a project's demand for limited housing subsidy.

Affordable Care Act Community Benefits

Section 9007 of the ACA requires non-profit hospitals to contribute 3 to 5 percent of their revenue toward community benefits, including community health improvement activities and in-kind support to community groups and organizations. The Newton-Wellesley Hospital's annual revenue of \$1.14 billion FY2012 obligates it to contribute between \$34 and \$57 million to programs within its community. In the first few years of the ACA, this funding source has been largely used to cover costs associated with uninsured patients, but as insurance coverage becomes universal, this money will be increasingly available for community organizations. This funding would be available more on the programming side, and aligns with [something about the penalty incurred for readmitting the same patient within 30 days... the hospital will be doubly incentivized to provide funding for an onsite health aide]

Social Impact Bond Financing

It's clear that independent senior housing saves a significant amount of money by delaying the need for nursing home care, which is much more expensive and often requires Medicaid subsidy. A major challenge of proposing a Social Impact Bond program is that, as a non-single-payer system, the number of healthcare providers is often as high as a half dozen in a single development. This fragmentation would require careful coordination on the part of a lender. MassHousing has indicated interest in bonding against the projected insurance savings.

Medicaid Waiver

The Medicaid savings indicated above demonstrate a vested interest in increasing access to independent senior living with supportive services. Although Medicaid does not currently reimburse for direct housing cost, it is possible that a state could obtain a 1115 waiver for a project or program that includes housing in healthcare service delivery. The Center for Medicare and Medicaid Services (CMS) has recently pushed RFPs for various proposals to reduce utilization for dual eligibles - individuals eligible for both Medicaid and Medicare - by enrolling them in coordinated care, provided onsite. Both of these funding mechanisms could cover costs associated with the project, and lead to savings for the Medicaid program. Further, the Community First Choice program, a 1915 waiver provides funding

for home and community-based attendant services and supports. The state receives an additional 6% matching rate for services associated with this option and is available for Medicaid recipients below 150% of the Federal Poverty Line that require an institutional level of care.

While coordinating healthcare and housing funding mechanisms is relatively new, there have been several precedents including Vermont's SASH program that we believe are promising future directions for better-coordinating both healthcare and housing. While Medicaid waivers are negotiated on a state-by-state basis, this is a potential for Massachusetts to pursue this option. It would require a significant amount of political will and likely a large amount of time, so we see it as an area for future growth, particularly as elderly housing stock becomes increasingly strained and healthcare costs rise.

OPERATIONS

Revenue & Operations

Operations have been designed to provide quality services to all residents while also creating savings through synergies with JCHE's nextdoor Coleman House, which the JCHE currently self-manages.

By creating synergies with nearby JCHE Coleman House operations, only one new resident services coordinator, one new maintenance staff, and 1.5 site representatives (on duty during off hours) are required for the additional building. The existing executive director, operating in a property management role, will oversee operations at both buildings. The current resident services director at Coleman House already operates a creative and diverse range of activities for seniors. This proposal expects these activities to be expanded and facilitated more easily with two different sites and more available space. The construction of the new building with additional administrative space for JCHE staff will improve the working experience for staff and enable them to serve residents more efficiently with private space for working with residents or more accessible storage space for recordkeeping.

The leases on our two commercial spaces will be triple-net at \$14 PSF in order to attract smaller local

operators and require low-cost menu offerings. Given the setback location of our site, we included a 50% vacancy factor during years 1 and 2, stabilizing at 10% in year 3. We assume both a 2.50% year-over-year expense and annual rent escalation.

Additionally, the project incorporates two other traditional sources of operating revenue: parking and laundry. In line with previous JCHE projects, we project revenues at \$6 per month per unit for laundry, increasing at 2.5% annually. In terms of parking, since the JCHE was required to build 150 surface and structured parking spaces for the Jewish Community Center as part of the subsidized land acquisition price, we project a \$50 per space annual reimbursement for snow removal and maintenance, again increasing at 2.5% annually.

Green Design Savings and Syndication

The inclusion of a cogeneration systems, geothermal systems, and 36 kilowatts of solar are important to annual operating costs. These energy saving materials are expected to reduce heating, water, and electricity costs by 40%, 30%, and 40% respectively. To model this we inflated the utility bills for JCHE's recent Schillman 150 unit affordable senior housing development in

Framingham, which already employs a geothermal system, to 2015 dollars and reduced the heating, water, and electricity costs accordingly. Using the Massachusetts SREC II program, the project is expected to syndicate \$10,260 annually in solar credits at the current after-auction fee rate of \$285 for the SREC II program. SREC II syndication revenues are projected to grow in line with Massachusetts projections for future SREC II auction pricing.

Sources of Funds - Commercial

Private Equity

JCHE Equity (Weinberg Foundation) \$ 460,711

Total Sources \$ 460,711

Consolidated Uses of Funds - Commercial

Hard Costs

Hard Costs \$ 331,200

Contingency (6%) \$ 19,872

Total Hard Costs \$ 351,072

Soft Costs

Soft Costs \$ 104,418

Contingency (5%) \$ 5,221

Total Soft Costs \$ 109,639

Total Commercial Costs \$ 460,711

Allowable Rents (# of Units)	Extremely Low Income Units	Section 8 Monthly	Low Income Units Monthly	80-120% AMI Units Monthly
Studio	N/A	N/A	\$1164 (20)	N/A
1-BR	\$530 (8)	\$1182 (23)	\$1060 (39)	\$1767 (11)
2-BR	N/A	N/A	\$1331 (0)	\$2462(4)

PRO FORMA

Operations	1	2	3	4	5	6
	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	Dec-23
<i>Rental Revenues</i>						
LIHTC Extremely Low Income Units + Section 8 Vc	\$ 326,232	\$ 331,125	\$ 336,092	\$ 341,134	\$ 346,251	\$ 351,445
LIHTC Low Income Units	\$ 775,440	\$ 787,072	\$ 798,878	\$ 810,861	\$ 823,024	\$ 835,369
80-120% Median Income Units	\$ 351,420	\$ 356,691	\$ 362,042	\$ 367,472	\$ 372,984	\$ 378,579
Market Rate Units	\$ 1,480,800	\$ 1,503,012	\$ 1,525,557	\$ 1,548,441	\$ 1,571,667	\$ 1,595,242
Total Rental Revenue	\$ 2,933,892	\$ 2,977,900	\$ 3,022,569	\$ 3,067,907	\$ 3,113,926	\$ 3,160,635
Other Revenue (Laundry)	\$ 10,800	\$ 11,070	\$ 11,347	\$ 11,630	\$ 11,921	\$ 12,219
JCC Parking Maintenance Reimbursements	\$ 7,500	\$ 7,688	\$ 7,880	\$ 8,077	\$ 8,279	\$ 8,486
SREC ii Energy Credit Syndication (Solar)	\$ 66,940	\$ 68,614	\$ 70,329	\$ 72,087	\$ 73,889	\$ 75,736
CHP Program Reimbursement (Cogeneration)	\$ 31,500	\$ 32,288	\$ 33,095	\$ 33,922	\$ 34,770	\$ 35,639
Gross Income	\$ 3,050,632	\$ 3,097,559	\$ 3,145,219	\$ 3,193,624	\$ 3,242,785	\$ 3,292,716
Bad Debts	-\$ 1,467	-\$ 1,489	-\$ 1,511	-\$ 1,534	-\$ 1,557	-\$ 1,580
Vacancy	-\$ 733,473	-\$ 119,397	-\$ 121,188	-\$ 123,006	-\$ 124,851	-\$ 126,724
Effective Gross Income	\$ 2,315,692	\$ 2,976,673	\$ 3,022,519	\$ 3,069,084	\$ 3,116,377	\$ 3,164,411
<i>Operating Expenses</i>						
Administration & Leasing	\$ 210,000	\$ 215,250	\$ 220,631	\$ 226,147	\$ 231,801	\$ 237,596
Maintenance	\$ 240,000	\$ 246,000	\$ 252,150	\$ 258,454	\$ 264,915	\$ 271,538
JCHE Management Fee	\$ 117,356	\$ 120,290	\$ 123,297	\$ 126,379	\$ 129,539	\$ 132,777
Security	\$ 20,000	\$ 20,500	\$ 21,013	\$ 21,538	\$ 22,076	\$ 22,628
Employee Benefits & Health Insurance	\$ 98,000	\$ 100,450	\$ 102,961	\$ 105,535	\$ 108,174	\$ 110,878
Electricity	\$ 62,471	\$ 64,033	\$ 65,634	\$ 67,274	\$ 68,956	\$ 70,680
Water & Sewer	\$ 42,000	\$ 43,050	\$ 44,126	\$ 45,229	\$ 46,360	\$ 47,519
Gas	\$ 77,725	\$ 79,668	\$ 81,660	\$ 83,701	\$ 85,794	\$ 87,939
Trash + Snow Removal	\$ 15,000	\$ 15,375	\$ 15,759	\$ 16,153	\$ 16,557	\$ 16,971
Insurance	\$ 54,000	\$ 55,350	\$ 56,734	\$ 58,152	\$ 59,606	\$ 61,096
Community Programing	\$ 102,000	\$ 104,550	\$ 107,164	\$ 109,843	\$ 112,589	\$ 115,404
Resident Services	\$ 104,000	\$ 106,600	\$ 109,265	\$ 111,997	\$ 114,797	\$ 117,666
Transportation Shuttle (Shared with Coleman)	\$ 40,000	\$ 41,000	\$ 42,025	\$ 43,076	\$ 44,153	\$ 45,256
Other	\$ 20,000	\$ 20,500	\$ 21,013	\$ 21,538	\$ 22,076	\$ 22,628
Taxes	\$ 150,300	\$ 154,058	\$ 157,909	\$ 161,857	\$ 165,903	\$ 170,051
Replacement Reserve	\$ 48,750	\$ 49,969	\$ 51,218	\$ 52,498	\$ 53,811	\$ 55,156
Total Operating Expenses	\$ 1,401,602	\$ 1,436,642	\$ 1,472,558	\$ 1,509,372	\$ 1,547,106	\$ 1,585,784
Net Operating Income	\$ 914,090	\$ 1,540,031	\$ 1,549,962	\$ 1,559,712	\$ 1,569,271	\$ 1,578,628
Deferred Developers Fee	\$ -	\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646
Debt Service	\$ 838,434	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926
<i>Debt Service Coverage Ratio</i>		1.15	1.16	1.17	1.17	1.18
Net Cash Flow	\$ 75,656	\$ 32,458	\$ 42,389	\$ 52,139	\$ 61,699	\$ 71,055
<i>Commercial Operations</i>						
Commercial Rent Revenues	\$ 22,400	\$ 22,960	\$ 23,534	\$ 24,122	\$ 24,725	\$ 25,344
Less Commercial Vacancy	-\$ 11,200	-\$ 11,480	-\$ 2,353	-\$ 2,412	-\$ 2,473	-\$ 2,534
Less Commercial Electricity	-\$ 706	-\$ 724	-\$ 742	-\$ 760	-\$ 779	-\$ 799
Less Commercial Water & Sewer	-\$ 475	-\$ 486	-\$ 499	-\$ 511	-\$ 524	-\$ 537
Less Commercial Gas	-\$ 878	-\$ 900	-\$ 923	-\$ 946	-\$ 969	-\$ 994
Less Commercial Real Estate Taxes	-\$ 7,412	-\$ 7,598	-\$ 7,788	-\$ 7,982	-\$ 8,182	-\$ 8,386
Net Cash Flow	\$ 1,729	\$ 1,772	\$ 11,230	\$ 11,511	\$ 11,799	\$ 12,094

KEY FINANCIALS

7	8	9	10	11	12	13	14	15
Dec-24	Dec-25	Dec-26	Dec-27	Dec-28	Dec-29	Dec-30	Dec-31	Dec-32
\$ 356,716	\$ 362,067	\$ 367,498	\$ 373,010	\$ 378,606	\$ 384,285	\$ 390,049	\$ 395,900	\$ 401,838
\$ 847,900	\$ 860,618	\$ 873,527	\$ 886,630	\$ 899,930	\$ 913,429	\$ 927,130	\$ 941,037	\$ 955,153
\$ 384,258	\$ 390,022	\$ 395,872	\$ 401,810	\$ 407,837	\$ 413,955	\$ 420,164	\$ 426,467	\$ 432,864
\$ 1,619,171	\$ 1,643,458	\$ 1,668,110	\$ 1,693,132	\$ 1,718,529	\$ 1,744,307	\$ 1,770,471	\$ 1,797,028	\$ 1,823,984
\$ 3,208,044	\$ 3,256,165	\$ 3,305,008	\$ 3,354,583	\$ 3,404,901	\$ 3,455,975	\$ 3,507,815	\$ 3,560,432	\$ 3,613,838
\$ 12,525	\$ 12,838	\$ 13,159	\$ 13,488	\$ 13,825	\$ 14,171	\$ 14,525	\$ 14,888	\$ 15,260
\$ 8,698	\$ 8,915	\$ 9,138	\$ 9,366	\$ 9,601	\$ 9,841	\$ 10,087	\$ 10,339	\$ 10,597
\$ 77,630	\$ 79,571	\$ 81,560	\$ 83,599	\$ 85,689	\$ 87,831	\$ 90,027	\$ 92,278	\$ 94,584
\$ 36,530	\$ 37,444	\$ 38,380	\$ 39,339	\$ 40,323	\$ 41,331	\$ 42,364	\$ 43,423	\$ 44,509
\$ 3,343,427	\$ 3,394,932	\$ 3,447,244	\$ 3,500,375	\$ 3,554,339	\$ 3,609,148	\$ 3,664,817	\$ 3,721,359	\$ 3,778,789
-\$ 1,604	-\$ 1,628	-\$ 1,653	-\$ 1,677	-\$ 1,702	-\$ 1,728	-\$ 1,754	-\$ 1,780	-\$ 1,807
-\$ 128,625	-\$ 130,554	-\$ 132,512	-\$ 134,500	-\$ 136,518	-\$ 138,565	-\$ 140,644	-\$ 142,754	-\$ 144,895
\$ 3,213,198	\$ 3,262,750	\$ 3,313,079	\$ 3,364,198	\$ 3,416,118	\$ 3,468,855	\$ 3,522,419	\$ 3,576,825	\$ 3,632,087

\$ 243,536	\$ 249,624	\$ 255,865	\$ 262,261	\$ 268,818	\$ 275,538	\$ 282,427	\$ 289,487	\$ 296,725
\$ 278,326	\$ 285,285	\$ 292,417	\$ 299,727	\$ 307,220	\$ 314,901	\$ 322,773	\$ 330,843	\$ 339,114
\$ 136,097	\$ 139,499	\$ 142,987	\$ 146,561	\$ 150,225	\$ 153,981	\$ 157,830	\$ 161,776	\$ 165,821
\$ 23,194	\$ 23,774	\$ 24,368	\$ 24,977	\$ 25,602	\$ 26,242	\$ 26,898	\$ 27,570	\$ 28,259
\$ 113,650	\$ 116,491	\$ 119,403	\$ 122,389	\$ 125,448	\$ 128,584	\$ 131,799	\$ 135,094	\$ 138,471
\$ 72,447	\$ 74,258	\$ 76,115	\$ 78,018	\$ 79,968	\$ 81,967	\$ 84,017	\$ 86,117	\$ 88,270
\$ 48,707	\$ 49,925	\$ 51,173	\$ 52,452	\$ 53,764	\$ 55,108	\$ 56,485	\$ 57,897	\$ 59,345
\$ 90,137	\$ 92,391	\$ 94,700	\$ 97,068	\$ 99,495	\$ 101,982	\$ 104,531	\$ 107,145	\$ 109,823
\$ 17,395	\$ 17,830	\$ 18,276	\$ 18,733	\$ 19,201	\$ 19,681	\$ 20,173	\$ 20,678	\$ 21,195
\$ 62,623	\$ 64,189	\$ 65,794	\$ 67,439	\$ 69,125	\$ 70,853	\$ 72,624	\$ 74,440	\$ 76,301
\$ 118,289	\$ 121,246	\$ 124,277	\$ 127,384	\$ 130,569	\$ 133,833	\$ 137,179	\$ 140,608	\$ 144,123
\$ 120,608	\$ 123,623	\$ 126,714	\$ 129,882	\$ 133,129	\$ 136,457	\$ 139,868	\$ 143,365	\$ 146,949
\$ 46,388	\$ 47,547	\$ 48,736	\$ 49,955	\$ 51,203	\$ 52,483	\$ 53,796	\$ 55,140	\$ 56,519
\$ 23,194	\$ 23,774	\$ 24,368	\$ 24,977	\$ 25,602	\$ 26,242	\$ 26,898	\$ 27,570	\$ 28,259
\$ 174,302	\$ 178,659	\$ 183,126	\$ 187,704	\$ 192,397	\$ 197,207	\$ 202,137	\$ 207,190	\$ 212,370
\$ 56,535	\$ 57,948	\$ 59,397	\$ 60,882	\$ 62,404	\$ 63,964	\$ 65,563	\$ 67,202	\$ 68,882
\$ 1,625,428	\$ 1,666,064	\$ 1,707,716	\$ 1,750,408	\$ 1,794,169	\$ 1,839,023	\$ 1,884,998	\$ 1,932,123	\$ 1,980,426
\$ 1,587,770	\$ 1,596,686	\$ 1,605,363	\$ 1,613,789	\$ 1,621,950	\$ 1,629,832	\$ 1,637,421	\$ 1,644,702	\$ 1,651,661
\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646	\$ 170,646
\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926	\$ 1,336,926
1.19	1.19	1.20	1.21	1.21	1.22	1.22	1.23	1.24

\$ 80,198	\$ 89,114	\$ 97,791	\$ 106,217	\$ 114,377	\$ 122,259	\$ 129,848	\$ 137,130	\$ 144,088
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\$ 25,977	\$ 26,627	\$ 27,292	\$ 27,975	\$ 28,674	\$ 29,391	\$ 30,126	\$ 30,879	\$ 31,651
-\$ 2,598	-\$ 2,663	-\$ 2,729	-\$ 2,797	-\$ 2,867	-\$ 2,939	-\$ 3,013	-\$ 3,088	-\$ 3,165
-\$ 819	-\$ 839	-\$ 860	-\$ 882	-\$ 904	-\$ 926	-\$ 949	-\$ 973	-\$ 997
-\$ 550	-\$ 564	-\$ 578	-\$ 593	-\$ 608	-\$ 623	-\$ 638	-\$ 654	-\$ 671
-\$ 1,019	-\$ 1,044	-\$ 1,070	-\$ 1,097	-\$ 1,124	-\$ 1,152	-\$ 1,181	-\$ 1,211	-\$ 1,241
-\$ 8,596	-\$ 8,811	-\$ 9,031	-\$ 9,257	-\$ 9,488	-\$ 9,726	-\$ 9,969	-\$ 10,218	-\$ 10,473

\$ 12,396	\$ 12,706	\$ 13,023	\$ 13,349	\$ 13,683	\$ 14,025	\$ 14,375	\$ 14,735	\$ 15,103
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Public Money

Public Subsidy/Affordable Unit:
\$153,772

Public Subsidy/Unit: **\$92,333**

Construction Costs

Hard Costs/SF: **\$272**

Hard Costs/Unit: **\$257,029**

Development Costs/SF: **\$394**

Development Costs/Unit: **\$371,447**

Operations

Operating Cost/Unit: **\$9,344**

Annual Operating Cost/SF: **\$9.89**

Property Taxes: **\$1,002 per unit**

(excluding commercial space)

Energy Efficiency

\$3.4 million in sustainability improvements (payback periods in sustainability section)

48% savings in gas utilities

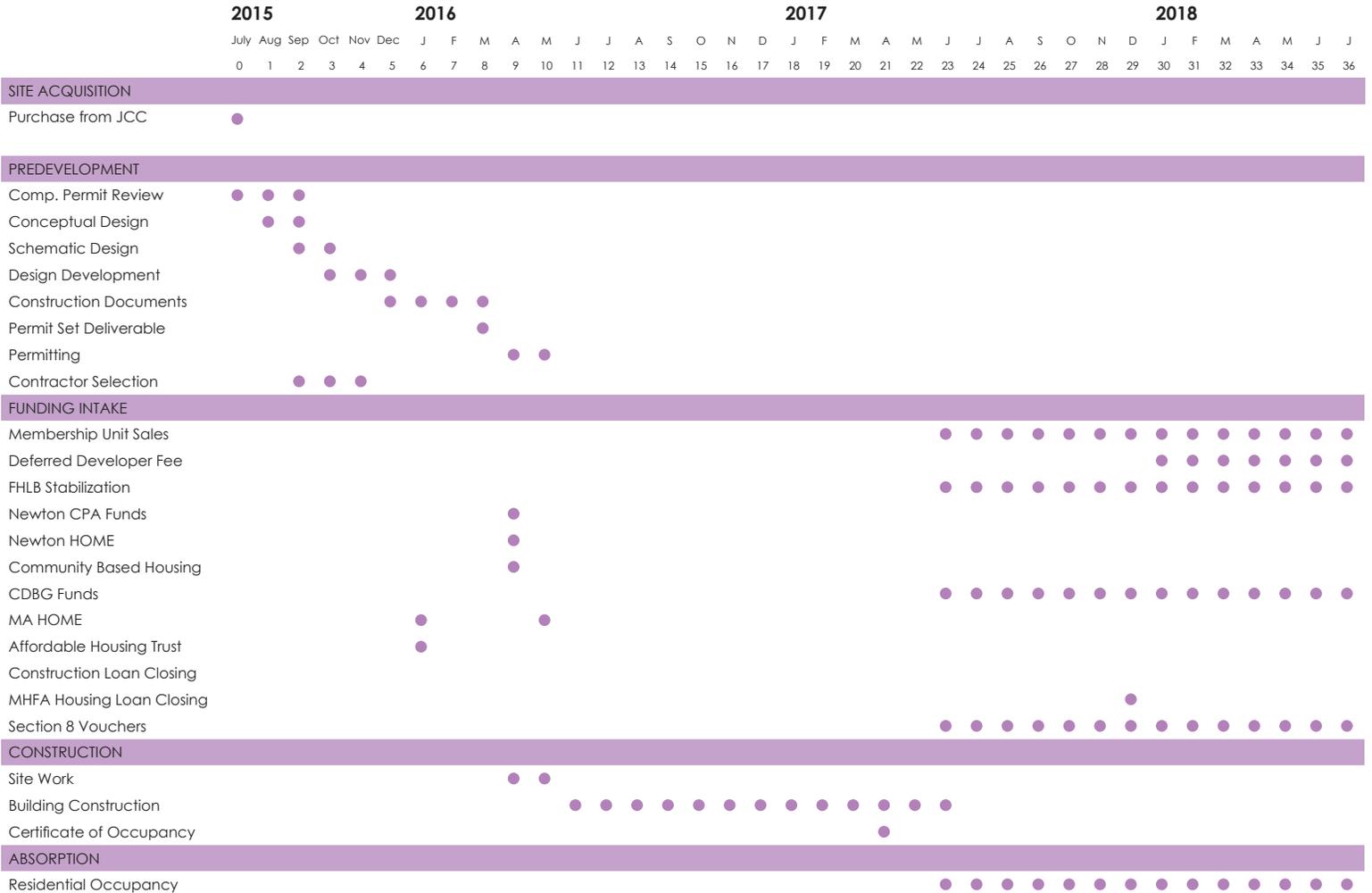
54.5% savings in electric utilities

\$185,000 in staff savings through

Coleman House synergies

TIMELINE

DEVELOPMENT SCHEDULE



Assuming that JCHE begins the site acquisition process and gains title by the summer of 2015, we anticipate this project to break ground by March 2016. Lease up will begin a few months before anticipated occupancy in June 2017 due to the pre-lease of market rate and moderate income units with an entrance deposit. The total development and construction

schedule is 20 months, aggressive for a project of this size and scope. We anticipate JCHE using an integrated design method, selecting a contractor earlier in the design process, allowing for greater contractor input and shortening of the predevelopment phase.

We anticipate strong demand for senior living in Newton with the

notable developer JCHE; absorption rates are expected to average 14 units per month until full occupancy. The project is expected to reach stabilization by the summer of 2018. By this point, we conservatively expect 50% of the commercial space to be leased, with full commercial stabilization by 2020.

SOURCES

- Insights and Innovations: The State of Senior Housing, Design for Aging Review 11, American AIA.
- Genworth Cost of Care Survey https://www.genworth.com/dam/Americas/US/PDFs/Consumer/corporate/Massachusetts_gnw.pdf
- Enterprise Green Communities Criteria, 2011.
- Enterprise Green Design Single & Multifamily Universal Design Specifications, 2012.
- Housing America's Older Adults: Meeting the Needs of an Aging Population. Harvard Joint Center for Housing Studies, 2014.
- Jewish Community Housing for the Elderly. 2015. "Project Summary Form: 132 Chestnut Hill Avenue."
- LB Johnson Apartments Green Community and Sustainable Design Features, provided by Cambridge Housing Authority.
- LIHTC QAP, 2015. "LIHTC QAP and Applications."
- Perspectives from Jewish Community Housing for the Elderly. JCHE Annual Report, 2012.
- "Smart Growth Profiles." Massachusetts Smart Growth Alliance. Web. 01 Mar. 2015.
- Steinman, Bernard A.; Gleason, Hayley; Somerville, Ceara; Mutchler, Jan E.; Center for Social and Demographic Research on Aging, University of Massachusetts Boston; and Gerontology Institute, University of Massachusetts Boston, "Living and Aging in Newton: Now and In the Future" (2014). Gerontology Institute Publications. Paper 103.
- "The Community First Olmstead Plan: A Summary." <http://www.mass.gov/eohhs/consumer/disability-services/living-supports/community-first/community-first-olmstead-plan.html>
- The Center for Universal Design (1997). The Principles of Universal Design, Version 2.0. Raleigh, NC: North Carolina State University.
- Tips and Techniques for Supporting Residents with Mental Illness: A Guide for Staff in Housing Older Adults. Frankel, Isenburg, Silverlieb, Burnes, 2012.

