



MILLERS COURT APARTMENTS

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01 THE PROJECT

Developer Goals

Our Mission

Executive Summary

Judging Criteria

An architectural rendering of a modern, multi-story senior living building. The building has a clean, minimalist design with large windows and a flat roof. In the foreground, there is a paved courtyard area with several people, including seniors and children, engaged in various activities. A large tree stands on the left side of the courtyard. The overall scene is set in an urban context with other buildings visible in the background.

*The future model of senior living in an urban context.
Integrating housing and services to enable extremely
low-income seniors to age in place.*

DEVELOPER GOALS

Re-envisioning the Existing Millers River

CAMBRIDGE HOUSING AUTHORITY

In 2013, the CHA initiated a \$500 million reinvestment campaign to upgrade and bring new capital to the authority's entire portfolio through the Rental Assistance Demonstration (RAD) program. However, the Millers River property was left out of the RAD conversion as it did not meet the eligibility. Millers River is now CHA's one remaining asset that is long overdue for rehabilitation. In pursuing this proposal, CHA's objectives for Millers River are three-fold:

RENOVATION

The existing Millers River building is a result of a 1970s turnkey project that employed poor construction detailing and has since suffered serious deterioration. Currently facing excessive energy consumption and a leaky building envelope, Millers River must undergo a deep energy retrofit that addresses these problems and brings the entire building up to modern energy efficiency and accessibility standards.

RECONFIGURATION

For its urban location, the 1.65 acre Millers River site is large parcel that is currently underutilized. Though the existing 297-unit tower contributes moderate density, there is opportunity to reconfigure the other single-story structures on site to more efficiently and intelligently add units that would serve more households on CHA's waiting list.

INNOVATION

As one of the original Moving to Work agencies in the country, CHA has a track record for innovation in cross-cutting spheres. The Millers River project should capitalize on CHA's past expertise and serve as a model to raise the bar for affordable, high-quality senior living.

EXISTING MILLERS RIVER BUILDING AND CONTEXT



CAMBRIDGE HOUSING AUTHORITY PROFILE

Mission: CHA's mission is to rehabilitate, preserve and create new units of permanently affordable housing to house the city's most vulnerable low-income populations. With over 5,600 units in the city, CHA serves nearly 11,000 Cambridge residents.

Portfolio: CHA has 3 housing programs: Family housing (1,936 units), Senior/Disabled housing (1,189 units) and Section 8/Housing Choice Vouchers (2,500 units). CHA's Senior Housing constitutes over half of housing designed for seniors in the city.

Target Population: The majority of residents in CHA senior housing are "dual eligible" seniors – individuals who qualify for both public housing and Medicaid. The vast majority are extremely low income seniors.

Capacity: CHA has a proven track record of innovation and efficiency as a HUD-designated Moving to Work (MTW) agency for the past 17 years.

Cambridge Housing Authority

houses 1 in 10 Cambridge residents

OUR MISSION

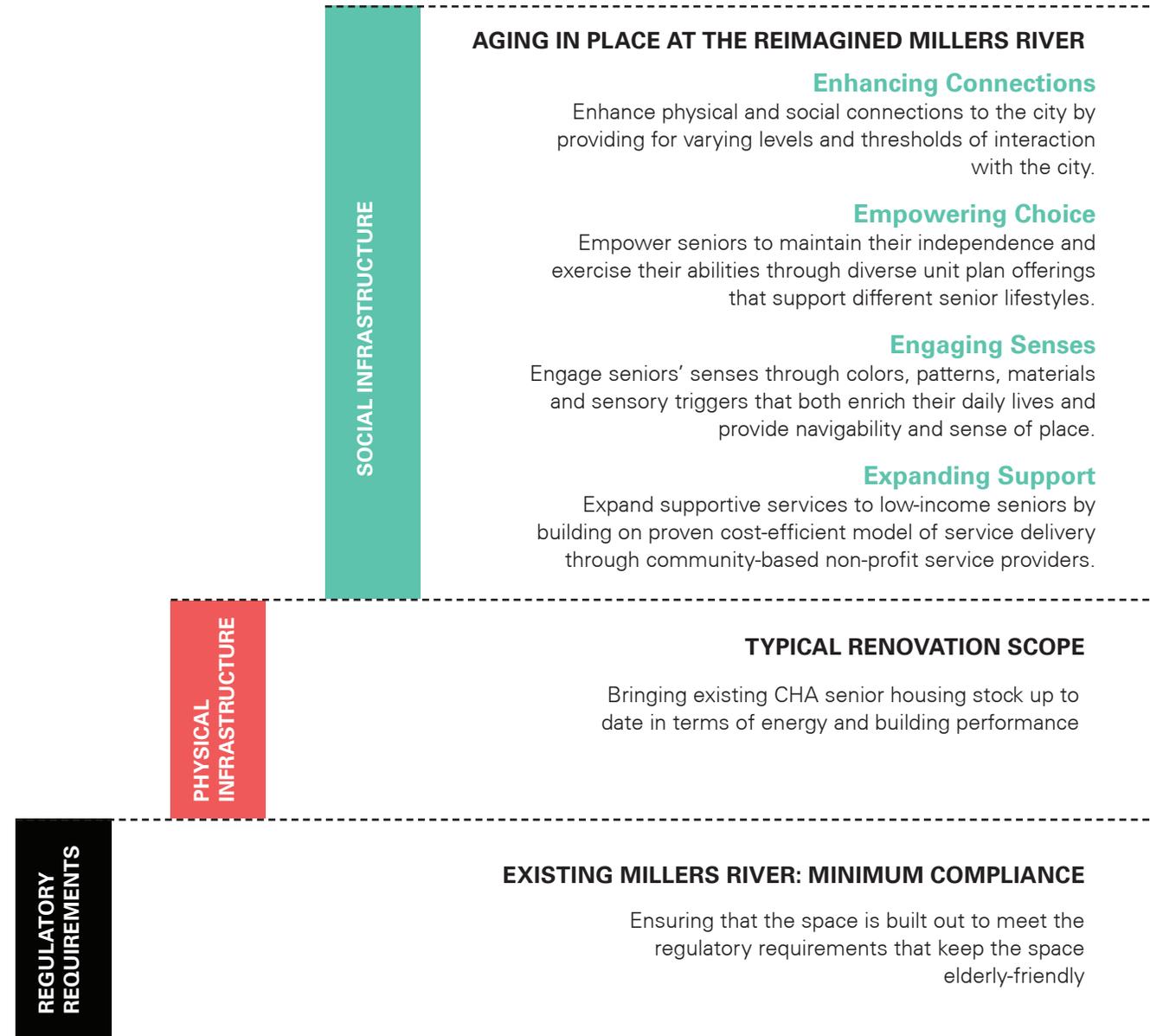
Raising the Bar for Aging-in-Place in Public Housing

MISSION

As a public agency, CHA aspires to provide quality housing for the city's lowest income seniors, but must do so without private sector resources. Therefore, our mission at the reimagined Millers River is to raise the bar for Aging-in-Place for low-income seniors by integrating housing, supportive services and connection to the city in public housing.

Millers River will raise the bar for Aging-in-Place in public housing by integrating supportive services and connection to the city through cost-effective design of physical and social infrastructure.

The Reimagined Millers River: Integrating Physical and Social Infrastructure



EXECUTIVE SUMMARY

Millers Court: Raising the Bar for Aging-in-Place in Public Housing

Raising the Bar

In place of past models of elderly housing that focus on minimum regulatory requirements alone, Millers Court reimagines the existing Millers River Apartments to integrate the physical and social infrastructure necessary to enable seniors to lead their lifestyles of choice.

Millers Court will have 366 permanently affordable senior housing units for extremely low, very low, and low income seniors in East Cambridge. 280 units are rehabilitated from the existing building and 86 units are new construction, which include 21 units serviced by Cambridge Health Alliance, 2 units of Community-based Housing for developmentally disabled adults and an on-site supportive services center. Furthermore, Millers Court introduces a series of four urban courtyards that enhances resident connection with the city and provides triple the open space required on-site.

Community Benefits

Through urban infill on the Cambridge Street edge, Millers Court creates opportunities for residents to meet and mingle with their neighbors. The addition of a public senior center that serves all of East Cambridge, a publicly-accessible courtyard, retail and office spaces also increases opportunities for interaction with the community.

Sustainability

Millers Court reduces electricity costs by 30% through a deep energy retrofit, provides on-site stormwater management and preserves 33% of the site (3 times more than required by zoning) as usable green open space in a dense urban context.

Financials

All of this is accomplished through a blend of public subsidies, hard debt, LIHTC equity and CHA's own equity in the form of deferred developer fees and existing building cash flows. Public subsidies for are \$1,429 per renovated unit and \$45,349 per new construction.



366	permanently affordable units for ELI, VLI and low-income seniors
280	units rehabilitated
86	units new construction including,
21	units serviced by the Cambridge Health Alliance
2	units of Community-Based Housing
69	net increase in units
3,795	sf local small business retail space
22,790	sf office space for non-profits
7,197	sf resident community space
5,177	sf East Cambridge senior community space
3,000	sf green community roof deck
502	PV panels installed
155,725	kWhr energy produced
30	% reduction in electricity use
25	% reduction in water use
200	% increase in caliper-inches provided on-site
33	% of site preserved as green open space
100	% of urban stormwater runoff reduced

JUDGING CRITERIA

Summary of Project

PROJECT FINANCING

- Delivers a total of 366 new and rehabilitated low-income senior units using only \$11,750 of public subsidy per unit (excludes tax credit equity).
- Utilizes an Acquisition Note to leverage basis boost for 4% LIHTC credits without additional capital outflow.
- Utilizes a Program Note, which banks any positive cash flow from the existing building, to raise \$1.8 million in equity.
- Leverages DHCD Senior Supportive Housing Program to provide services, case management and home care to dual-eligible seniors at no additional cost to CHA.
- Capitalizes on the unique ability of the CHA to generate project-based vouchers at 120% HUD FMR and to leverage debt at 36% LTC.
- Improves project operating cash flow through deep energy retrofit that reduces overall energy costs by over 25%.

PHYSICAL DESIGN

- Better integrates “tower in the park” design into East Cambridge fabric through urban infill and courtyard strategy.
- Rehabilitates existing 280 senior units with deep energy retrofit and badly needed interior gut rehab to bring in light and increase units by 40sf.
- Provides additional 86 senior units on-site through sensitive placement of new wing that doesn’t detract from existing views.
- Completely reimagines community spaces to facilitate thresholds of sociability and engagement with the city.
- Increases number of elevators to 3 in existing building and 3 in new wing to enhance accessibility and shorten waiting times for elderly residents.
- Reorients existing ambiguous entrances into a generous pedestrian entry on Lambert St, safer improved vehicle drop-off on Medford St, and better designed urban entrance on Cambridge Street.
- Utilizes interior materials and finishes that streamline cleaning and maintenance for long-term durability and sustainability.

COMMUNITY RESPONSIVENESS

- Recognizes and honors the spectrum of personalities, lifestyles, modes of mobility and personal preferences represented by existing Millers River residents.
- Prioritizes the desire of existing Millers River residents to remain in community by creating on-site relocation space.
- Responds to diversity of resident preferences and lifestyle needs through multiple unit type offerings.
- Provides a much-needed senior center for the surrounding senior community in Cambridge and Somerville.
- Restores continuity of the urban fabric by addressing “missing tooth” of commercial space along Cambridge street.
- Facilitates a harmonious relationship between Cambridge Street small businesses and Millers River residents.

ENVIRONMENTAL SENSITIVITY

- Epitomizes “smart growth” principles through urban infill strategy in mixed-use transit-rich location near amenities, open space and services.
- Doubles amount of existing caliper-inches on-site and provides substantial urban tree canopy for neighborhood.
- Reduces energy usage through deep energy retrofit and cuts electricity costs by 25% through PPA agreement that feeds back into the grid on off-peak hours.
- Features 502 PV array on roof of existing building that generates 155,725 kWhr annually.
- Manages 100% of stormwater on-site, reducing load on city mains.
- New construction portion achieves an additional 88 points above the baseline mandatory requirements for Enterprise Green Communities, performing well above the standard for certifiability.

PROJECT FEASIBILITY

- Capitalizes on CHA’s expertise, experience, and relationships built over 80 years of service in the city to execute a large complex project.
- Provides much-needed housing for extremely low and very low income elderly individuals at a scale that is very difficult to finance by leveraging on Project-Based Vouchers
- Mitigates parking impact through provision of all required parking spaces on-site
- Respects character of the existing community and has minimal visual impact through sensitive placement of new wing.
- Contributes public benefits including senior community space for East Cambridge and Somerville residents

INNOVATION

- Employs unique phasing and relocation strategy through the use of on-site swing space to avoid displacing a fragile population.
- ‘Condo-izes’ the properties on the site into separate and independently-financed LLCs in order to maximize LIHTC equity and supportable mortgage.
- Re-invests positive cash flow generated by existing Millers River property to finance the construction of new construction, adding 25% more units to serve the city’s most vulnerable seniors.
- Devotes 100% of units to permanent affordability to 30%, 50% and 60% AMI senior households.
- Utilizes 4 bedroom units as Community Based Housing model that accommodates seniors that require significant assistance with daily life with personalized 24-hour care.
- Expands and dedicates a full floor to an on-site supportive service center operated by the Cambridge Health Alliance through a PACE that provides in-home care to seniors at no additional cost to them

02 THE CONTEXT



Demographic Analysis

Senior Housing Stock Analysis

East Cambridge Neighborhood Analysis

Residents & Local Insights

East Cambridge is undergoing rapid demographic and economic change. How do we ensure that low-income and elderly populations can be a part of the “new” East Cambridge?

DEMOGRAPHIC ANALYSIS

Responding to Changing Needs

AN AGING NATION

Our citizens are living longer and the United States is not prepared to meet the housing needs of this aging group. According to the US Census Bureau, by 2050, individuals above 60 years of age will constitute over 28% of the total population, up from 21% in 2015. Furthermore the population over the age of 85 will triple by 2050 and represent nearly 5% of the population, up from 2% in 2015.

According to a report by the Harvard Center for Housing Studies conducted jointly with AARP Foundation, 33% of citizens that are 50+ and 37% of people 80+ are experiencing a significant shift in their lifestyle, having to cut down on expenses related to healthcare and healthy diets to be able to afford to pay 30% of their fixed income (or life savings) for housing units that may not fit their needs. The lack of basic accessibility features in the existing housing stock makes it difficult for the elderly to find housing that supports their needs, especially those with disabilities. Furthermore, with most available housing being in suburban areas far away from transit nodes, elderly individuals who are unable to drive become isolated and trapped in their own homes.

In face of future demographic changes, the growing demand for affordable housing integrated with health care services will be a major challenge for America. This is especially important when we are dealing with dual-eligible populations, who have limited housing options with the rising unaffordability of housing and growing needs for healthcare services and social assistance.

The “young-old” care about active living; the “old-old” are more concerned with access to healthcare and services.

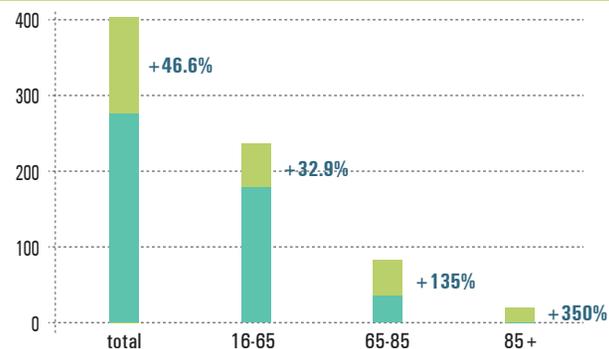
AN AGING CITY

Cambridge, like the nation, is also seeing a surge in populations over the age of 60. The Metropolitan Area Planning Council, estimates that the Cambridge population above 60 years of age will increase by 42% from 2000 to 2030. This surge has not been adequately addressed in Cambridge’s current planning policies.

Furthermore, Cambridge is demonstrating a life expectancy for the average citizen at a high of 83 years in 2009. With a large proportion of Cambridge residents working past the traditional retirement age of 65, some have more financial assets and income than previous generations and hence are entering their later years with more active lifestyles. This has created two divergent segments of the aging population of Cambridge: the “young-old” group who can enjoy active living and the “old-old” group who are more concerned with access to health care and services.

Housing that is affordable, physically accessible, well-located, and coordinated with supports and services is in too-short supply.

Projected Change in Age of US Population Between 2015 and 2050 (in millions)



The Cambridge population over 60 years of age will increase by nearly 42% between 2000 and 2030.

Source: MAPC



Projected Change in Age of Cambridge Population Between 2000 and 2030

	2000	2030	%
Age 19 and under	18,829	21,838	16.0%
20-44	55,234	63,252	14.5%
45-59	15,157	16,349	7.9%
60+	12,135	17,186	41.6%
Total	101,355	118,625	17.0%

SENIOR HOUSING STOCK ANALYSIS

Severe Lack of Housing for the Elderly

SENIOR HOUSING SHORTFALL

Based on a Cambridge demographic analysis, there is a severe shortfall of housing specifically designed with seniors in mind. A 2010 City report estimates that out of a total of 49,500 units in the entire city's rental housing stock, a total of 11,755 units can be considered appropriate for seniors. However, a majority of these units (82%) are market-rate residential buildings serviced by elevators that are not designed specifically to serve an elderly population.

Currently, there are only 1,233 units in the city specifically designed for seniors – enough to house just 10% of Cambridge residents aged 60 or above.

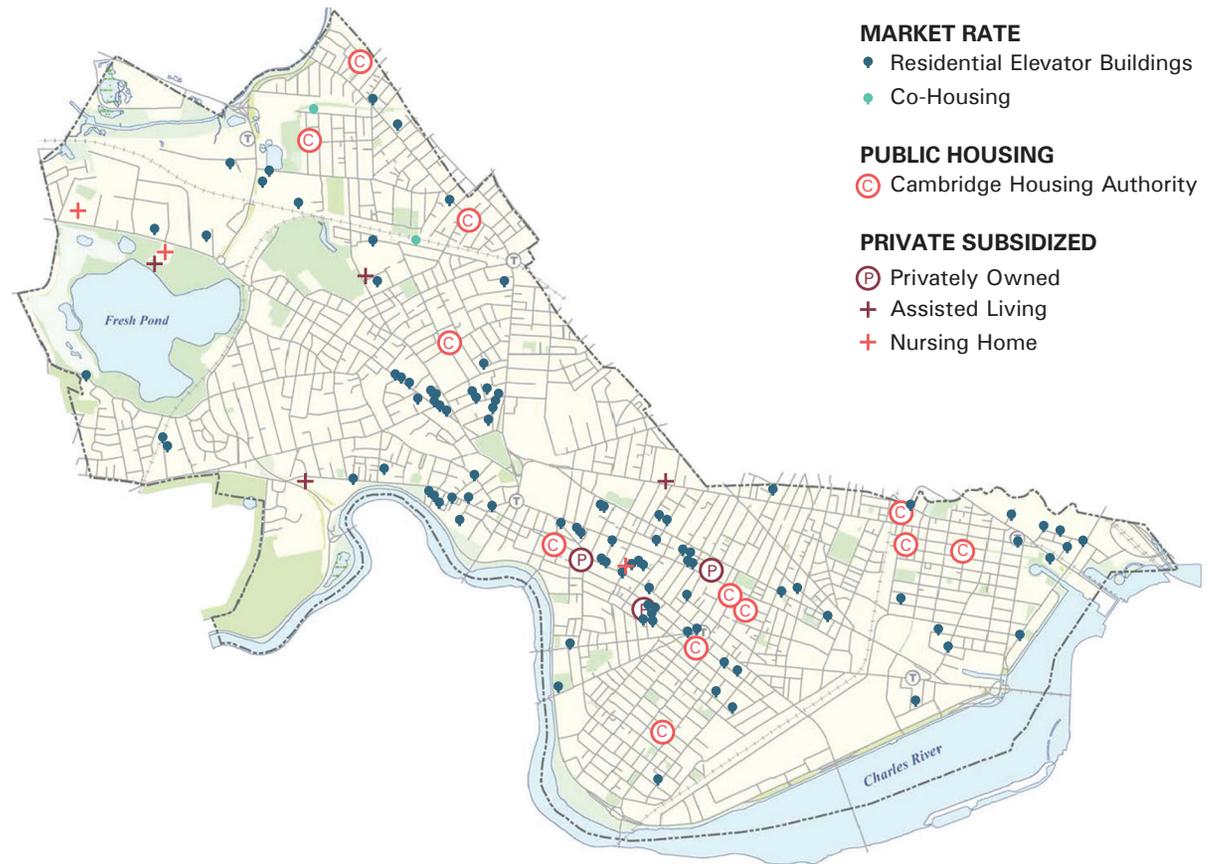
Among these 1,223 units, CHA's senior housing units constitute over 56%. Millers River alone represents a quarter of CHA's senior housing stock. There is a pointed need for more senior housing in the city, especially units to serve low-income elderly that cannot afford market rate prices.

CHA is the single largest provider of senior rental housing in the city.

INVENTORY OF SENIOR RENTAL HOUSING UNITS IN CAMBRIDGE (2010)

All rental housing stock	49,500 units
Market rate buildings with elevators	9,642 units
Market rate cohousing	72 units
CHA public housing	1,189 units
Private 55+ subsidized housing	238 units
Private assisted living facilities	278 units
Nursing homes	336 beds

SENIOR RENTAL HOUSING UNITS IN CAMBRIDGE (2010)



CITYWIDE

1 In 5 People in Cambridge is 55+



1 In 10 People in Cambridge is 65+ and living alone



FOR THOSE 65+

1 In 8 are in Poverty



1 In 10 do not speak English Fluently



EAST CAMBRIDGE NEIGHBORHOOD ANALYSIS

Keeping Seniors on Main Street

REAL ESTATE BOOM IN EAST CAMBRIDGE

The rise in market rate development is nowhere better exemplified than in East Cambridge. Originally an industrial center for Italian and Portuguese working families, East Cambridge has transformed into a world-renowned biotechnology and entrepreneurship cluster that has brought with it interest from the private real estate market. As of 2015, there were 30 active special permit projects in East Cambridge alone, and upwards of 6 million square feet recently completed or under construction. Once a quiet neighborhood for working families, East Cambridge is now the focus of intense development. This raises the question of what will happen to East Cambridge's most vulnerable residents.

Younger Households, Higher Incomes

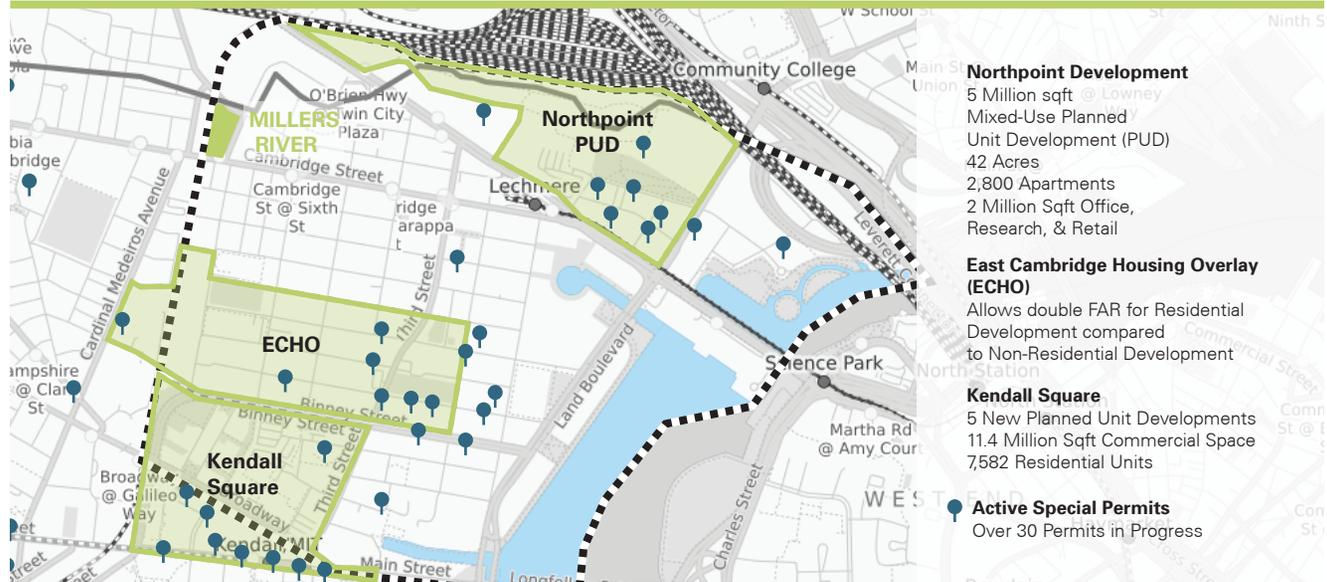
The population of East Cambridge has also undergone immense changes over the past three decades. In sheer numbers, population and density have almost doubled. Large increases in "non-family households," dropping household size, and doubling of median household incomes signals that the population change may in fact be caused by the replacement of working class families with higher-skilled young professionals. In the face of changing demographics and rising property prices, the CHA's work is crucial to the continued provision of affordable housing to neighborhood residents.

Keeping Seniors on "Main Street"

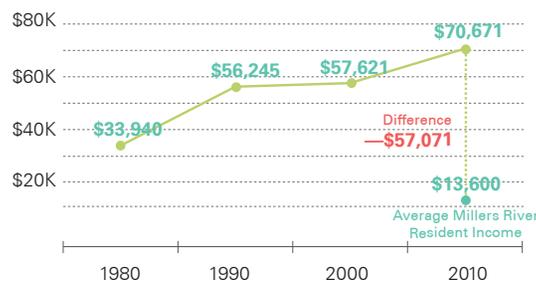
Millers Court is a rare opportunity to keep Cambridge seniors not only in the city, but on "Main Street". The location, mix of uses and proximity to transit and neighborhood amenities makes this site a critical opportunity to truly embed East Cambridge seniors into the community they already call home.

Once a quiet neighborhood for working families, East Cambridge is now the focus of immense development.

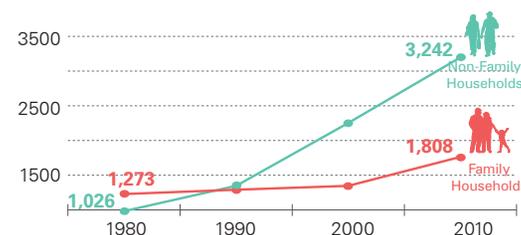
DEVELOPMENT ACTIVITY IN EAST CAMBRIDGE



Increasing Median Income



Changing Household Types



Existing Fabric of East Cambridge



Proposed Kendall Square Development



RESIDENT & LOCAL INSIGHTS

Visioning for Millers Court

ENGAGEMENT METHODOLOGY

The team developed an engagement strategy that would highlight current residents' needs, as well as the perspectives of potential future residents and the current local business community. This was accomplished through a comprehensive survey of existing residents, personal interviews with 9 small business owners along the Cambridge Street commercial district, outreach to elderly residents across CHA senior housing properties and site visits with current on-site management and service providers.

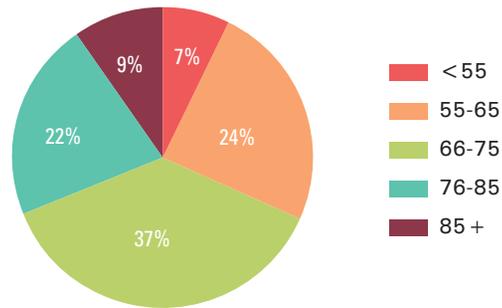
DIVERSE RESIDENT NEEDS

Even within a primarily elderly population, there is great diversity in the needs and wants of the residents. Residents range from as young as 35 all the way up to 95 years old; some are retired whereas others are still working. Some residents lead a fairly independent life and prepare their own meals whereas others rely on multiple social assistance programs for daily living.

Residents currently use the community space to not only engage in individual activities like reading and listening to music, but also utilize the space for more social activities like meeting friends or attending meetings. Residents express a range of preferences from those who want more private and quiet spaces to others who express a desire for more social programming and activities.

Aside from these differences, across the board, residents are very attached to their homes and highly value the accessibility of Millers River to nearby amenities. Many residents have stayed at Millers River for more than a decade and will continue to live there until they are no longer able to live independently.

RESIDENT AGE RANGES



RESIDENT INCOME BREAKDOWN

100% of households earn less than \$41,400.

Low Income (60% AMI)

97% of households earn less than \$34,500.

Very Low Income (50% AMI)

83% of households earn less than \$20,700.

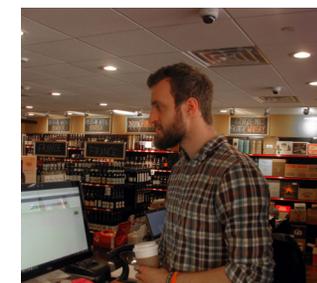
Extremely Low Income (30% AMI)

*"This is my little corner of heaven, please don't mess with it too much!"
"I live a private life" "Love the view from the apartment" (Various Residents)*

LOCAL BUSINESS COMMUNITY

The team's canvassing of the businesses around the existing Millers River Apartments have shown that most businesses are welcoming of new development. Many existing business owners are excited to see development in the area that would attract new clientele.

The only cause for concern is the lack of parking to support such rapid pace of development. Businesses like the New Deal Fish Shop, established in the 1930s, attract customers from all over the city, Massachusetts, and even neighboring states. Overall, the existing Millers River is seen by business owners as just another residential building in the neighborhood, and not specifically as senior housing.



"[Millers River does not] adequately meets the needs of seniors with chronic conditions" (Resident)

03 THE DESIGN

Existing Millers River

Proposed Millers Court

Zoning & Entitlements

Urban Context

Design Strategy

Design Approach

Connection

Urban Campus

Design Proposal

Ground Floorplan

Typical Floorplan

Supportive Services Center (2F)

Unit Plans

Programming

An architectural rendering of a modern urban courtyard. The scene is set in front of a multi-story building with a grid of windows. The courtyard features a paved walkway, several trees, and a low concrete wall. People of various ages and abilities are depicted: a woman with a cane, a man sitting on a bench, a woman with a child, a man with a dog, and a person in a wheelchair. The overall atmosphere is one of a vibrant, inclusive community space.

Designing for a spectrum of needs. Moving beyond the binary of public vs private spaces to connect residents to their neighbor, their community, and their city. A project of urban infill that will revitalize and beautify.

EXISTING MILLERS RIVER

Baseline Conditions

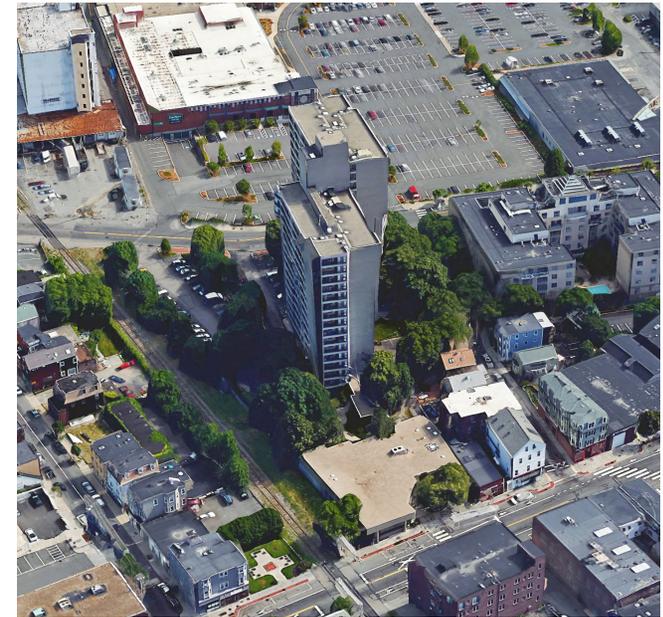
The existing Millers River was originally constructed in 1974, and is a cast-concrete high-rise building typical of construction practices at the time.

The complex currently consists of a 17 and 19 story tower with 297 units, a connector building and a single-story community building with frontage along Cambridge Street. The existing unit mix includes 220 studios, 76 1-bedrooms and 1 2-bedroom units. The existing built area consists of 186,863 square feet in the main tower, 978 square feet in the connector building and 8,133 square feet in the community building. There are 73 parking spaces for residents on-site, including 7 handicap accessible spaces.

The existing Millers River 1.65 acre site is located at the end of a historic river, the Millers Creek, that was made into a canal in the early 1800s and was later infilled. The current name of the property is derived from this creek.

EXISTING MILLERS RIVER

Main Building	186,863 ft ²
Studio	220 units
1 bed	76 units
2 bed	1 units
4 bed (CBH)	0 units
Total Units	297 units
Millers River Community Building	8,133 ft ²
Connector Building	978 ft ²
Existing Millers River Total	195,974 ft ²
Service-enriched units	
Cambridge Health Alliance units	16 units
CBH units	0 units
Structured Parking (73 spaces)	21,900 ft ²
Outdoor Green Space	25,112 ft ²



DEFICIENCIES & STRENGTHS

	Deficiencies & Constraints	Strengths & Opportunities
Design	<ul style="list-style-type: none"> • Small elevator lobbies • Awkward common spaces • Lack of small informal spaces • Dark corridors • Unit mix dominated by studios • Poor energy performance 	<ul style="list-style-type: none"> • Stunning views of Cambridge • Diverse site edges • Transit rich location • Cambridge St frontage • Many Mature Trees on Site
Finance	<ul style="list-style-type: none"> • Costly utilities • Extremely low-income and very low-income tenant population 	<ul style="list-style-type: none"> • Access to Enhanced Vouchers for increased rental income without burden on residents
Operations & Services	<ul style="list-style-type: none"> • Service providers constrained by inflexible physical layout of building 	<ul style="list-style-type: none"> • Existing partnerships with non-profit service providers

PROPOSED MILLERS COURT

Proposed Design

The existing Millers River is reimagined as Millers Court, composed of a total of 366 senior units and 4 urban courtyards, that triple the amount of green space on site. Millers Court is the result of (1) the construction of a new 86-unit senior residential wing including a mix of new 2-bedrooms, (2) the renovation and deep-energy retrofit of predominantly studios into 280 1-bedrooms, and (3) the construction of 31,762 square feet of mid-rise mixed-use commercial space. 100% of Millers Court's 366 units are permanently affordable for extremely-low, very-low and low income seniors.

Millers Court also expands housing choice and leverages existing state-funded supportive service programs to enable the city's lowest-income seniors to truly age in place. To serve this population, Millers Court offers an on-site supportive services center, resident community center, senior center serving all East Cambridge and Somerville seniors, 22,790 square feet of office space prioritizing local non-profits, and 3,795 square feet of ground floor retail space for local small businesses.

Over a 6 year project development timeline, Millers Court will undergo a unique and intentional phasing plan that considers the desires of current residents to live on-site rather than relocate during construction. By building the new wing first and using it as swing space during the renovation, Millers Court will allow the existing community to remain intact.

Millers Court's physical design, integration of supportive services and embrace of the urban context will further embed its senior residents into the East Cambridge community that they call home.

PROPOSED MILLERS COURT

NEW WING (COMPLETION 2018)

<input checked="" type="checkbox"/> New Wing		82,667 ft ²
Studio	0 units	
1 bed	48 units	
2 bed	36 units	
4 bed (CBH)	2 units	
Total Units	86 units	

<input checked="" type="checkbox"/> Millers Court Community Center		7,197 ft ²
New Wing Total		133,864 ft ²

RENOVATED BUILDING (COMPLETION 2021)

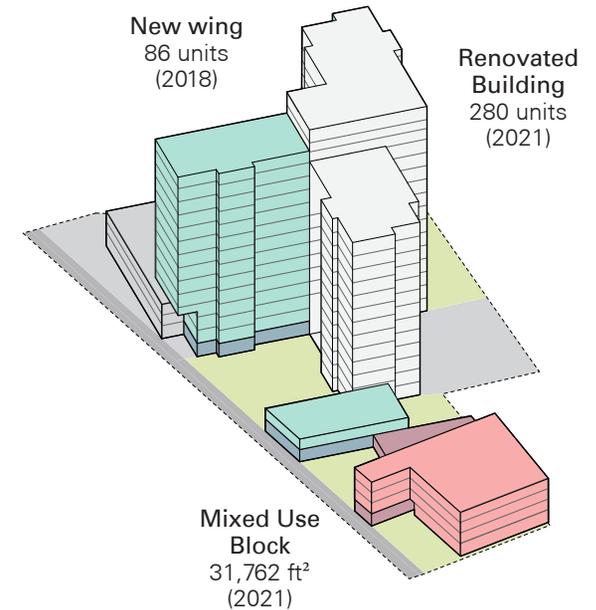
<input type="checkbox"/> Renovated Building		176,228 ft ²
Studio	0 units	
1 bed	279 units	
2 bed	1 units	
Total Units	280 units	

MIXED USE BLOCK (COMPLETION 2021)

<input type="checkbox"/> Retail		3,795 ft ²
<input type="checkbox"/> Office		5,177 ft ²
<input type="checkbox"/> East Cambridge Senior Center		5,177 ft ²
Mixed Use Total		31,762 ft ²

<input type="checkbox"/> Structured Parking (168 spaces)		44,000 ft ²
<input type="checkbox"/> Outdoor Green Space		23,960 ft ²

Service-enriched units		
<input checked="" type="checkbox"/>	Cambridge Health Alliance units	21 units
<input checked="" type="checkbox"/>	CBH units	2 units



ZONING & ENTITLEMENTS

Integrating a Non-Conforming Building into the Community

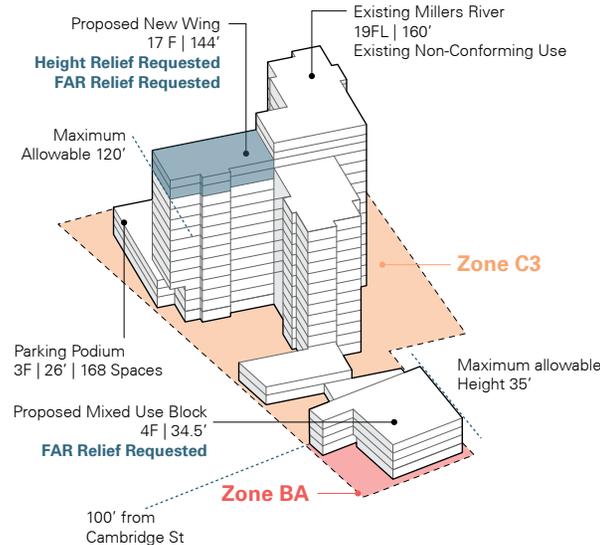
APPLICABLE REGULATIONS

Business A (neighborhood commercial) applies to the first 100 feet offset from Cambridge Street. The rest of the site is under Residence C3 zoning, which is the city's most intensive residential district. The existing building is non-conforming, exceeding both FAR and height.

Zoning Relief Requested

Millers Court aims to better integrate into the community, but cannot resolve this within requirements that are already exceeded by the existing building. Therefore, zoning relief for FAR and height are requested in order to allow for the construction of 86 new senior units (25% increase). In exchange, Millers Court provides public benefits, such as 3 times the open space required, a senior center for all Cambridge and Somerville seniors and office space for non-profits. Shadow studies confirm that new wing will add marginal shadows that only affect parking lots that lie north and east of the site.

ZONING DIAGRAM



SHADOW STUDY



ZONING REQUIREMENTS & RELIEF

	BUSINESS A (BA)	RESIDENCE C3	RELIEF REQUESTED & RATIONALE
Maximum FAR	1 (business) 1.75 (residential)	3	Relief requested. The proposed FAR is 2.6 in the BA district and 5.1 in the C3 district. Relief for FAR should be granted because the existing building has already exceeded the maximum, thus a project that strictly complied with the regulations would be forced to reduce the number of units on-site. Instead, Millers Court provides a net increase of 69 units, 50% increase in community space and office space for non-profits.
Min lot area / DU	600sf	300sf	No relief requested.
Min setback (Front, Side, Rear)	None, None, Minimum 20ft	Minimum 6ft, Height + Length of building/6, Minimum 20ft	No relief requested.
Max height	35' (business) 45' (residential)	120'	Relief requested. The proposed height of new wing (144') exceeds allowable height limit by 24'. This additional height accommodates 2 floors (14 additional units for seniors) and is the critical square footage to make the project financially feasible.
Min open space	-	10%	No relief requested. Project provides 33% open space, providing over 3 times the open space required.
Allowable uses	Residential, offices, labs, retail	Single-family, duplex, multifamily	No relief requested. Uses all intentionally help preserve the neighborhood character of the commercial district.
Parking	Retail: 1 per 1000sf Restaurant: 1 per 5 seats Bar: 1 per 10 seats	Senior: 0.5-0.25 per du Multifamily: 1 per du	No relief requested. Project provides 168 spaces on-site, exceeding requirements by 23 spaces. This proactively mitigates any parking impact on surrounding streets due to increased commercial activity.

URBAN CONTEXT

Neighborhood Assessment

SITE EDGES

Located at the edge of the Somerville-Cambridge city line, Millers Court is bounded by four different street edges. Cambridge Street (to the south) is a commercial “Main Street” filled with small mom-and-pop retail stores. Lambert Street (to the east) is a quiet side street marked by large oak trees and generous tree cover. Medford Street (to the north) is characterized by high-speed traffic flow and big box retail development. The Grand Junction Railroad (to the west) is the future site of the Grand Junction Community Path that will include bike lanes, walking paths and shared linear outdoor community spaces.

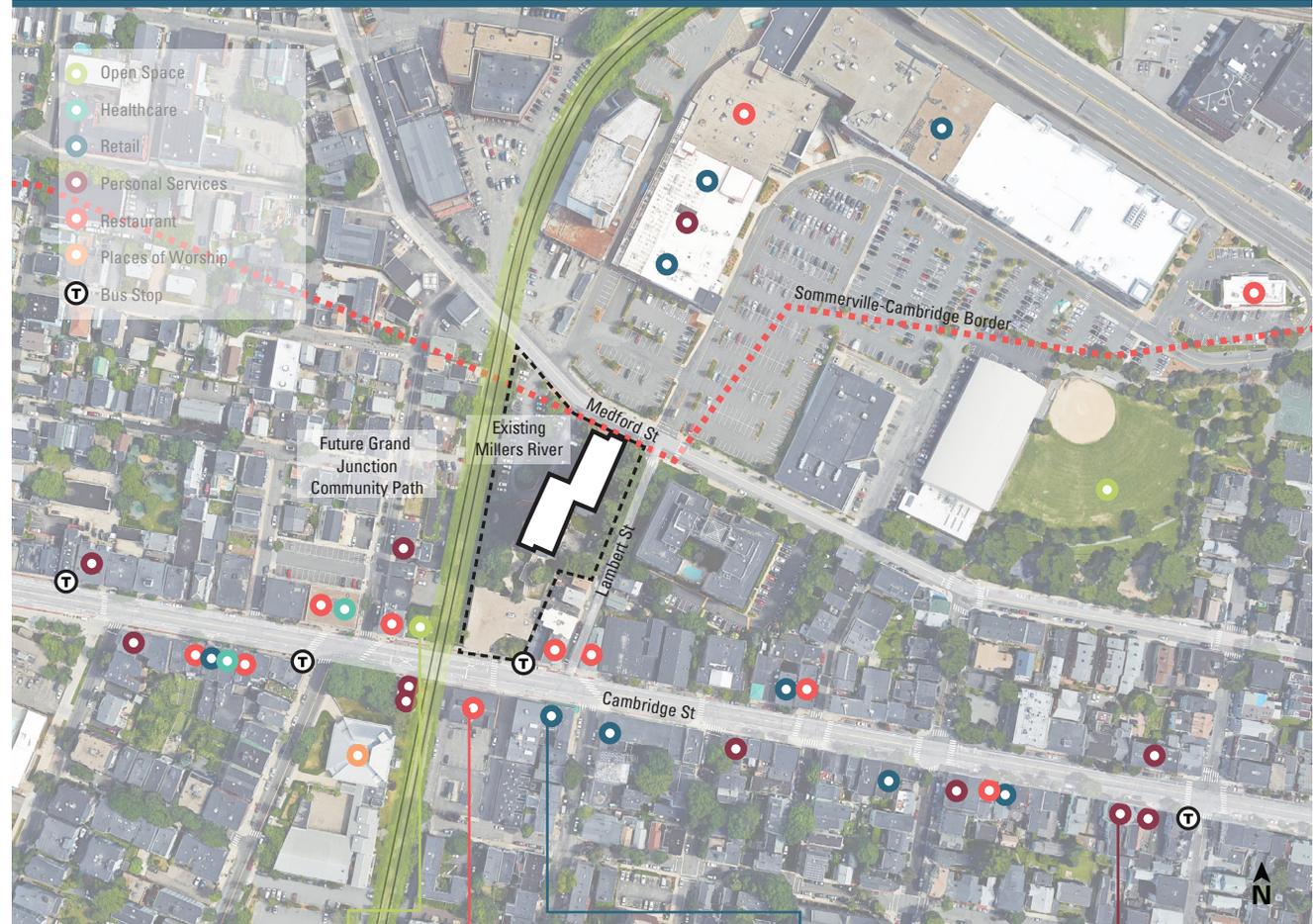
Connectivity

The site is transit-rich and multi-modal with bus routes, train stops, bike lanes, car-sharing services, and bike-sharing options all within a 10 minute walking distance. This allows residents to not only access the local neighborhood but to also tap into all that the cities of Cambridge, Boston and Somerville have to offer. In under 30 minutes, residents can reach the heart of downtown Boston or venture out to the Fresh Pond Reservation.

Neighborhood Amenities

The desire to eat, work and play in your local neighborhood is not limited to the millennial generation. Seniors desire to live in communities that can meet all of their daily basic needs. The Cambridge Street edge of Millers Court will feature a diverse mix of local retailers, service providers, open space and places of worship.

NEIGHBORHOOD AMENITIES



Within a 10 minute walk

1 MBTA Stop 

2 Hubway Stations  

7 Zipcar Sites      

8 Bus Routes         (69, 80, 85, 86, 87, 88, 91, CT2)



DESIGN STRATEGY

Proposed Site Plan

ENHANCING URBAN CONNECTIONS

Millers Court strengthens the advantage of its multiple street frontages by strategically providing multiple entry points for the different users, allowing for both privacy and urban connectivity.

- 1 Cambridge Street:** Entry to Retail
- 2 Public Plaza:** Entry to Office and East Cambridge Senior Center
- Courtyard:** Access to East Cambridge Senior Community and Millers Court Residents
- Courtyard:** Access to Millers Court Residents
- Lambert Street:** Pedestrian Entrance to Millers Court and Front Garden
- Medford Street:** Vehicular Entrance to Millers Court and Parking for Residents
- Staff Parking:** Parking and back of house for Millers Court staff



DESIGN STRATEGY

Active Cambridge Street Entrance



DESIGN APPROACH

Connections: Enabling Choice of Private and Public

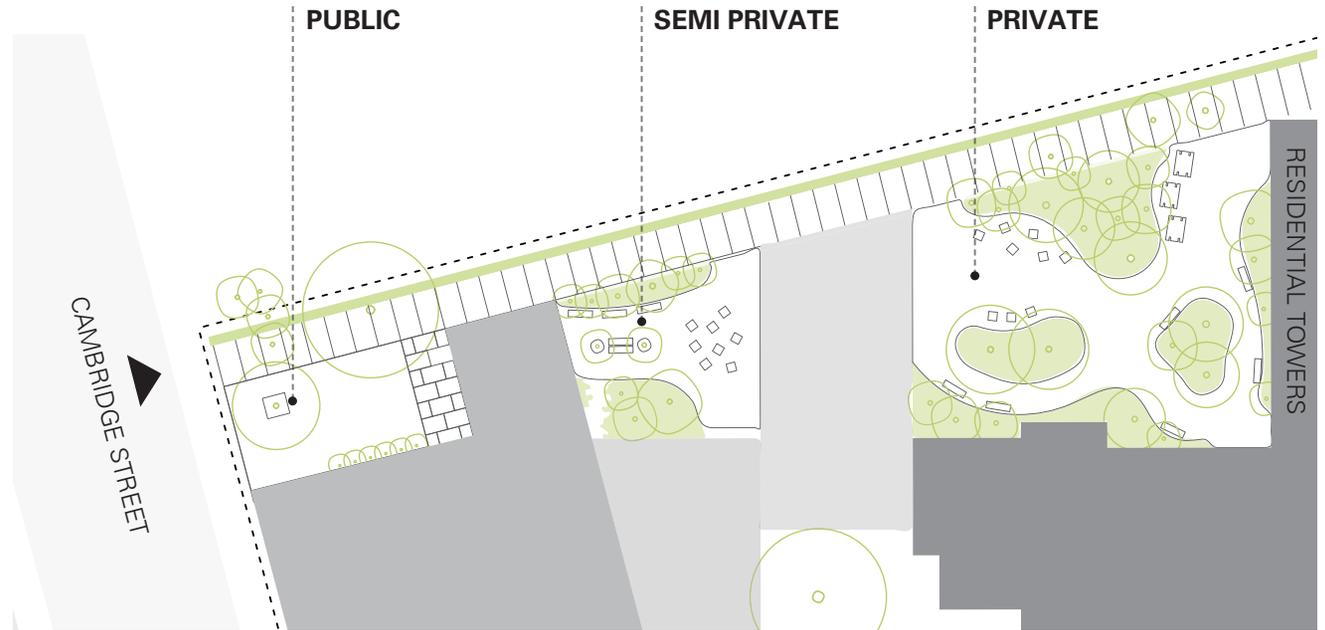
INTRODUCING COURTYARDS

Millers Court can be understood in three different scales as a **connector** that bridges the gap between Cambridge Street and the existing residential towers.

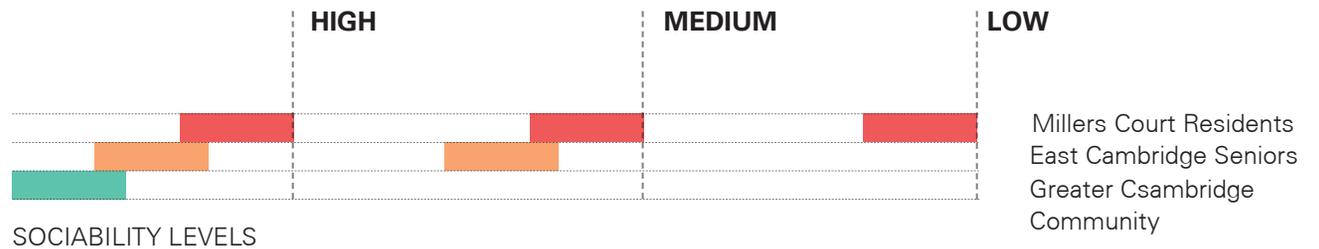
The three distinct courtyards are bounded by different programs and can be accessed by specific users throughout the day. This allows the residents to occupy **three distinct spaces of social interaction**. These courtyards embody the design mission by effectively integrating **physical and social infrastructure** that raise the quality of living for both the residents and the East Cambridge community.

The courtyards create a holding environment in which different **users** can interact, providing the senior residents with a **choice** of different lifestyles. Combining the familiar with the new, the proposed courtyards will allow the senior residents of Millers Court to engage in different **levels of social interaction** depending on their physical and mental conditions.

Urban Courtyards: Enabling Choice for Sociability



KEY SITE PLAN



SOCIABILITY LEVELS



DESIGN APPROACH

An Urban Campus

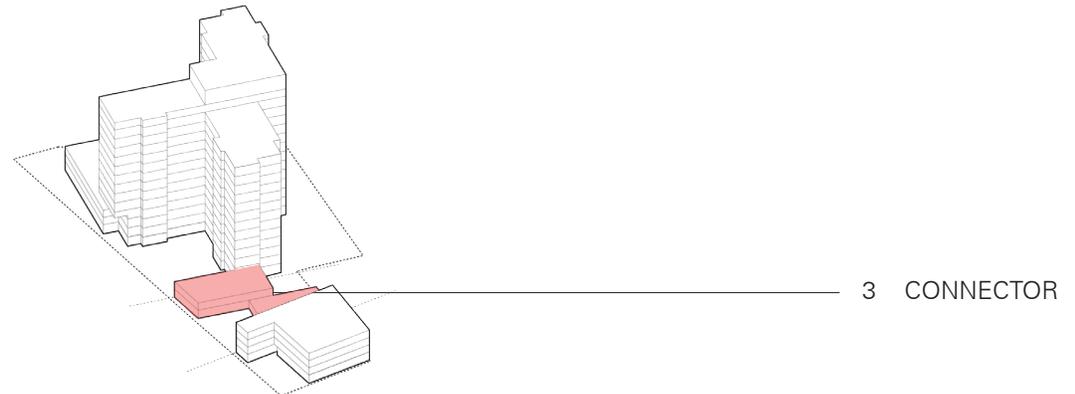
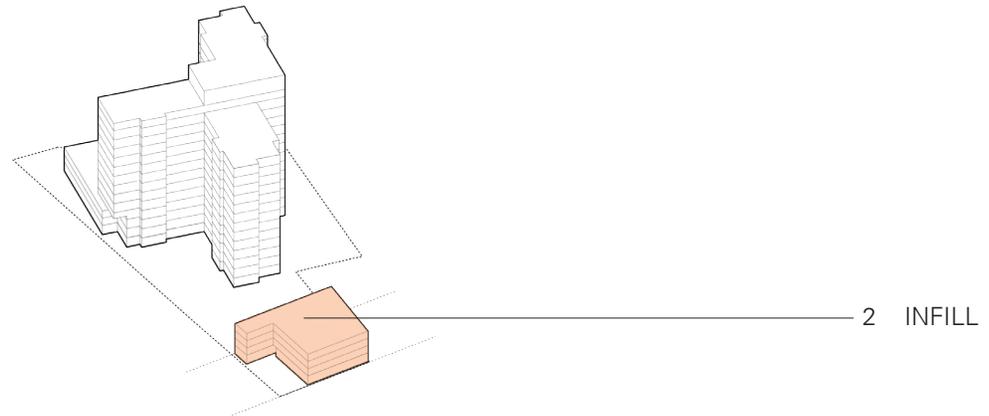
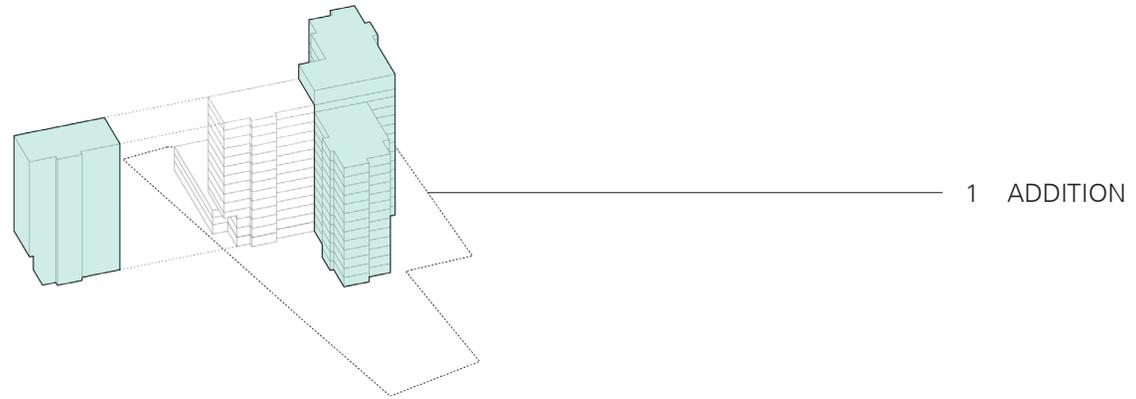
SITE STRATEGY

Our proposal addresses the existing site conditions using three strategies.

Addition: A new residential wing plugs into the existing structure. This allows us to give new life to the existing tower by introducing a new elevator, adding unit types and improving the thermal performance.

Infill: Even though our site has a frontage on Cambridge Street, there is currently a gap in the site's interaction with the street. We intend to fill this "missing tooth" by adding a mixed-use retail and office program.

Connector: Dedicated community space for the residents of Millers Court is provided, in addition to the East Cambridge Senior Center which is open to the community. Creating a connection between these two shared spaces allows for a flow of foot traffic that activates Cambridge Street and flows into Millers Court.



DESIGN PROPOSAL

Ground Floor Entry Plan



DESIGN PROPOSAL

Millers Court Community Space Looks Onto Quiet Courtyard



DESIGN PROPOSAL

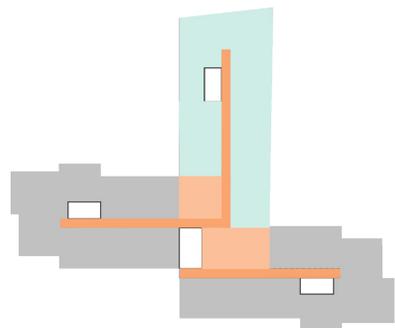
Typical Floor Plan

A STRATEGIC ADDITION

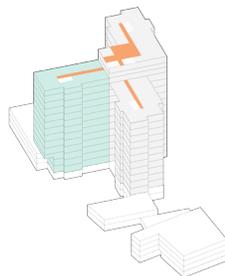
Millers Court enhances the existing physical infrastructure by making strategic additions at the existing core in order to extend the building out into a new wing. This additional lobby space on every floor then becomes the “living room” for the new extended floor. The project imagines a new future for the building, its residents and the greater East Cambridge community.

The goal of the typical floor plan is two fold; first, to **upgrade the building** by renovating the existing units and second, to **introduce new life** by adding new units, a new elevator and an improved lobby area.

- 1 New Elevator
- 2 Renovated Elevator Lobby
- 3 New Units
- 4 Renovated Units



- Renovated Units
- Renovated Elevator Lobby
- New Units



DESIGN PROPOSAL

Supportive Services Center (2nd Floor Plan)

DEDICATED FLOOR FOR EXPANDING SUPPORTIVE SERVICES

Millers Court will supplement housing with expanded services. This reflects the national trend in the U.S. as a result of the Affordable Care Act to focus on preventative and holistic health of seniors.

Cambridge Health Alliance Partnership

As part of the Program of All-inclusive Care for the Elderly (PACE), the Cambridge Health Alliance currently provides a wide range of medical, social, recreational, and wellness services to residents on the 6th floor. These services will be moved to the 2nd floor to provide easier access.

Community Based Housing (CBH) Units

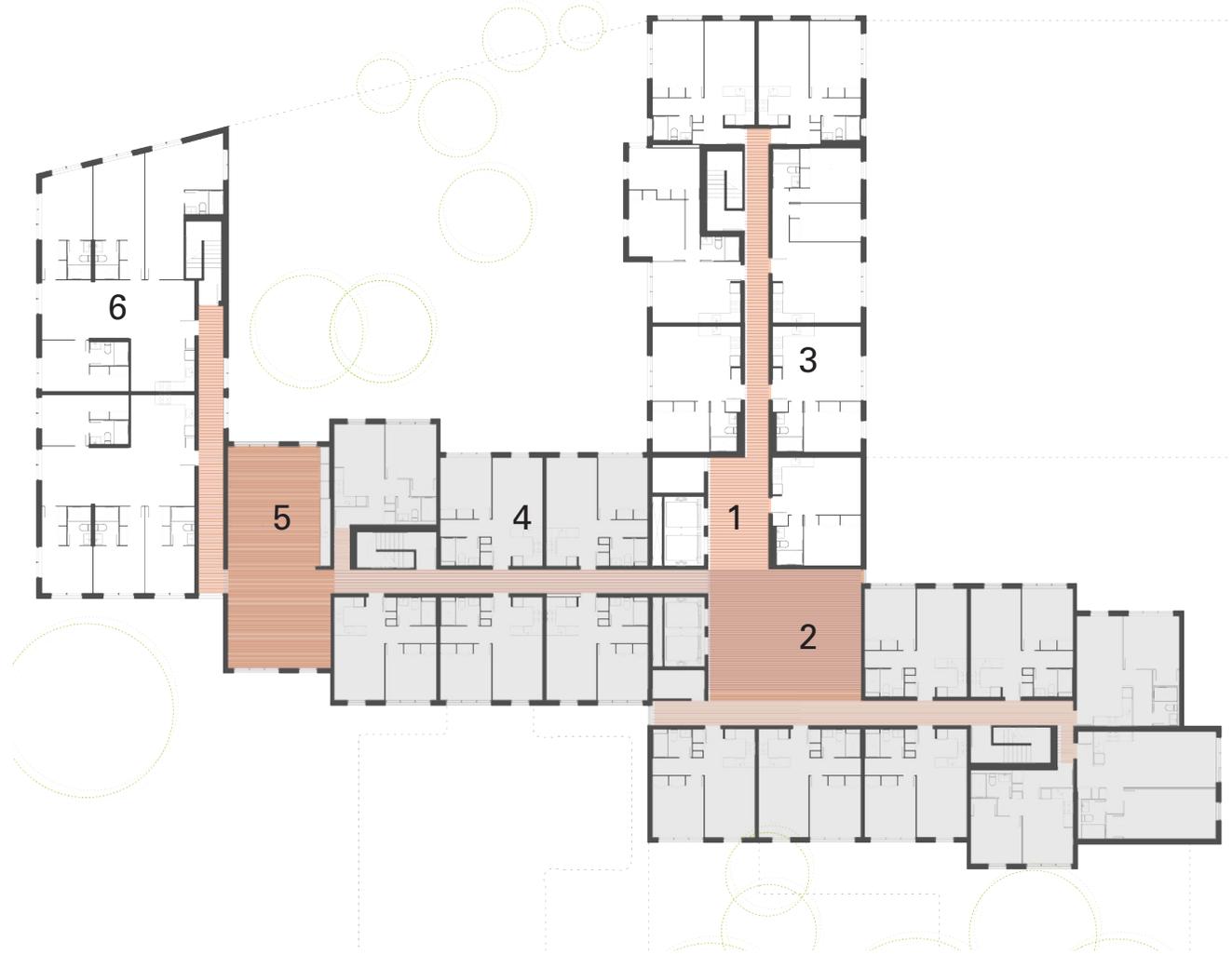
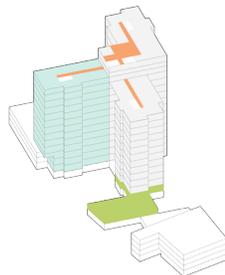
The 2nd floor features the addition of 2 CBH units, designed to serve seniors who require significant assistance with daily living. Each unit will house 4 individuals who share a bathroom, kitchen, and living and will receive enhanced 24-hour around the clock care.

Supportive Senior Housing (SSH) Program

The entire building will also be served by the state's Senior Supportive Housing (SSH) Program. Through SSH, residents can gain access to housekeeping, structured social activities, medication reminders, transportation, shopping, and laundry services.

- 1 New Elevator
- 2 Renovated Elevator Lobby
- 3 New Units
- 4 Renovated Units
- 5 Supported Services
- 6 4 Bedroom CBHp Units

- Renovated Units
- Supported Services
- New Units



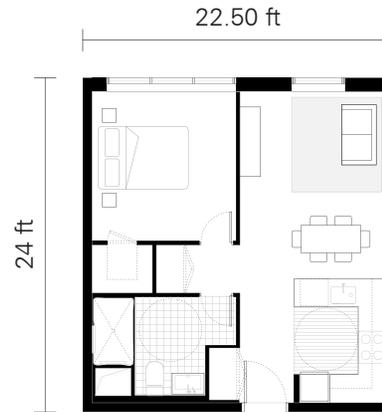
DESIGN PROPOSAL

Unit Plans

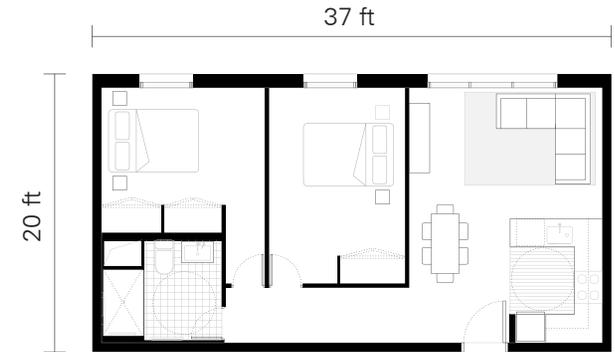
INCLUSIVE & UNIVERSAL DESIGN

Millers Court provides a variety of units to its residential community that respond to a range of different needs and family structures.

All units at Millers Court are designed to comply with the Type-A accessibility guidelines of the Fair Housing Act in order to provide a higher quality of comfort and living standard for the seniors.



1 BEDROOM
AREA: 600 SF



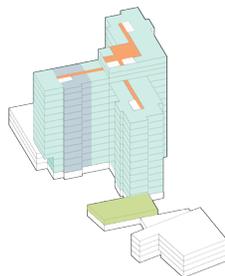
2 BEDROOM
AREA: 850 SF



4 BEDROOM (CBH)
AREA: 1300 SF

- lower kitchen workstations
- level type door hardware
- accessible thresholds throughout
- fully compliant features with grab bars
- 5ft turning radius
- lower shelving

- 1 Bedroom Units
- 2 Bedroom Units
- 4 Bedroom Units (CBH)



PROGRAMMING

A Day at Millers Court

This map traces a day in the life of four different people who spend time at Millers Court.

SARAH - PRIVATE RESIDENT

Sarah is a resident of the recently renovated South Wing. She enjoys the calm atmosphere of the private courtyard and view from the dining area. Occasionally she likes to play board games with some of her friends.

1. Wakes up / eats breakfast in dining area
2. Plays checkers with a friend in a common area
3. Visits the supportive services center for a routine check-up
4. Sits outside in private courtyard to read a book and eat lunch
5. Returns to her apartment to watch TV and eat dinner

ROGER - SOCIAL RESIDENT

Roger is an outgoing gentleman. He lives in the newly constructed wing and enjoys socializing with other residents and those who frequent the East Cambridge Community Center.

1. Drives to nearby shopping center to buy groceries
2. Returns home to make lunch
3. Bumps into Sarah and chats on his way about
4. Birthday BBQ held in semi-public courtyard for a friend
5. Picks up laundry he put in that morning
6. Goes home to cook dinner

MARIA - RESIDENT'S DAUGHTER

The daughter of a resident, Maria works in the neighborhood and is able to drop by frequently to see her father on her way home.

1. Stops to buy a cup of tea at the corner cafe
2. Goes upstairs to the offices to visit a friend
3. Finds her father doing crossword puzzles in the social center
4. Takes him back upstairs to his apartment in the North Wing
5. Walks home for the evening

DAN - COMMUNITY NEIGHBOR

Dan goes to school up the road and is browsing shops in the neighborhood on his way home.

1. Buys a new pair of sneakers he tries on
2. Runs into a friend and has an ice cream
3. Heads home for dinner



04 SUSTAINABILITY

Scales of Sustainability

City
Building
Unit

Metrics

Enterprise Green Communities
Smart Growth



With rising utility costs and 65% of U.S. public housing built before 1970, improving public housing energy efficiency presents a significant challenge.

SCALES OF SUSTAINABILITY

Existing Conditions and Strategy

CURRENT CONDITIONS

The improvement of public housing energy use has become a top priority of the U.S. Department of Housing and Urban Development. With rising utility costs, approximately 65% of U.S. public housing units were built before 1970 improving public housing energy efficiency presents significant challenges.

Therefore, energy efficiency improvements and integration of green/sustainable technologies has become an integral part of the CHA portfolio management strategy.

EXISTING BUILDING SUSTAINABILITY ASSESSMENT

COMPONENT	ISSUE
Building Envelope	<ul style="list-style-type: none">Leaky windows letting in both cold air and waterConcrete slab cold bridge in exterior balconiesLarge window walls are inefficient and act as a cold bridge
Water Use	<ul style="list-style-type: none">Water consumption is more than twice that of an efficient building
Gas Use	<ul style="list-style-type: none">Incredibly high usage of gas especially during the winter even though efficient boilers were installed in 2005
Electricity Use	<ul style="list-style-type: none">Higher usage of electricity measured than in comparable buildings in winter months. This could be due to residents running individual space heaters in the lower floors or using the AC in the overheated upper floors.

TRIPLE GREEN STRATEGY

01 SITE Respecting Existing Resources



1. Extend the expanding tree canopy along Cambridge street and railroad tracks into the site.
2. Install a subsurface detention and infiltration system under the parking structure to manage all storm water from the site.
3. Take advantage of the urban context of the site by utilizing public transit.

02 BUILDING High Performance Facade



1. Reclad the exterior facade and by adding a new layer of insulation, exterior cladding, and window.
2. Add solar panels to the roof of the renovated building. Coat the remaining roofs with high reflectivity coating.
3. Enclose underutilized balconies

03 UNIT User Efficiency



1. Install high efficiency windows
2. Use low flush toilets to minimize water waste
3. Replace faucet and showerheads with low flow designs .
4. Remove bathtubs and replace with showers

SITE

Long-term Sustainable Growth

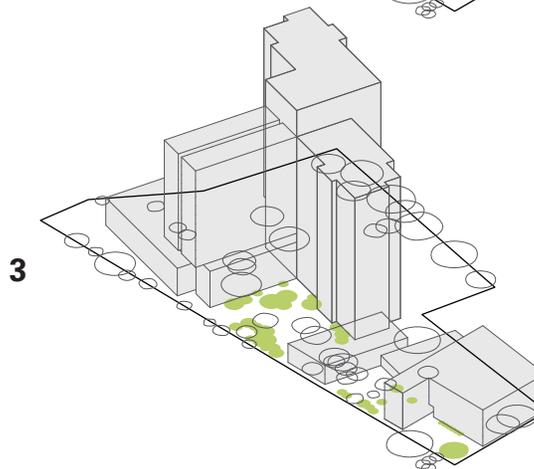
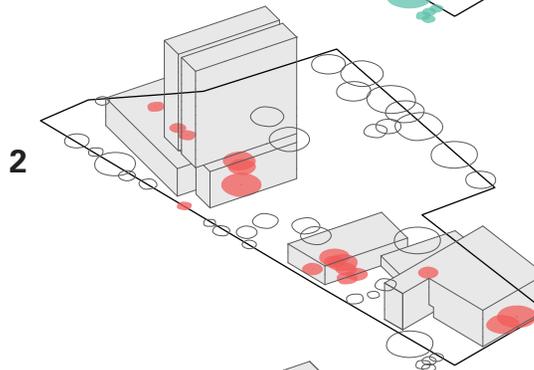
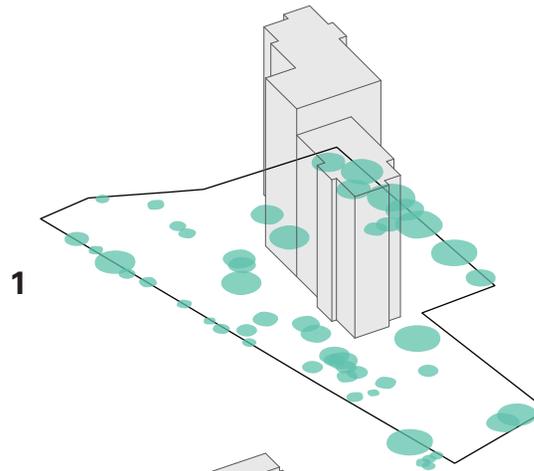
SURVEY: TREE INVENTORY

The landscape strategy prioritizes the preservation of large healthy heritage trees. Deciduous trees are ideal for creating cool shady environments in the hot summer but also allow for the penetration of heat gain in the cold winters.

1 Existing: The existing outdoor spaces at Millers River enjoy plentiful canopy, but the stand shows the effects of storm damage and as a whole is aging out. Heritage trees larger than 18" DBH tend to populate the eastern edge of the site.

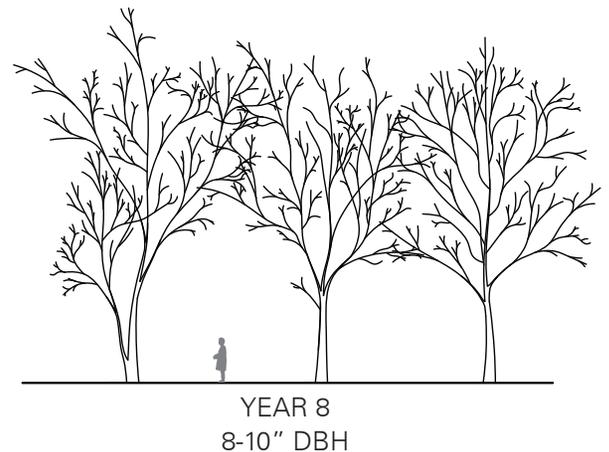
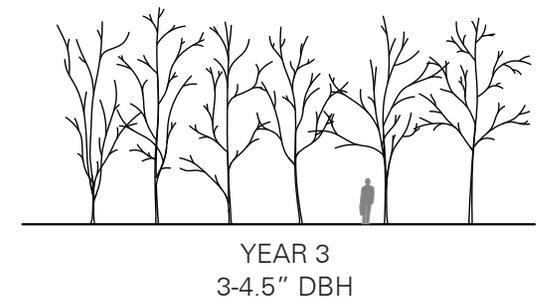
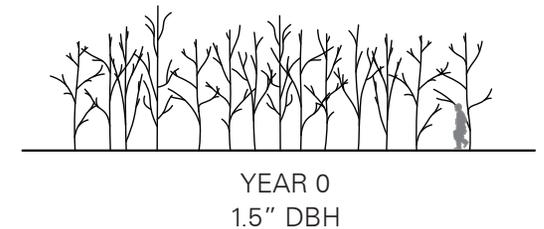
2 Development / Loss: Site planning strategically places new development to avoid removing healthy heritage trees. By reducing the gross caliper of trees removed (219") and employing a new landscape strategy focusing on programmed courtyards, there is plenty of room to regrow a healthier new stand.

3 Regrowth: New trees are introduced in great number (354" gross caliper) in order to maintain and improve the outdoor programming planned for residents at Millers River.



COST EFFECTIVE REGROWTH

Planting small caliper trees in dense groves gives great immediate effect at a fraction of the cost of larger trees. Over time trees are culled to make space for the best growing of the stand. Those that remain experience less shock from transplantation and will in effect grow into larger, healthier trees in the long term.



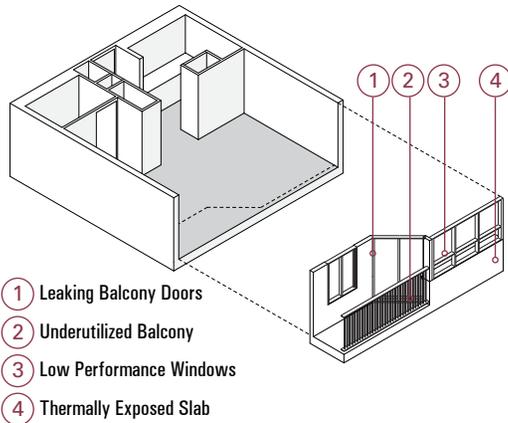
BUILDING

Improving Energy Performance

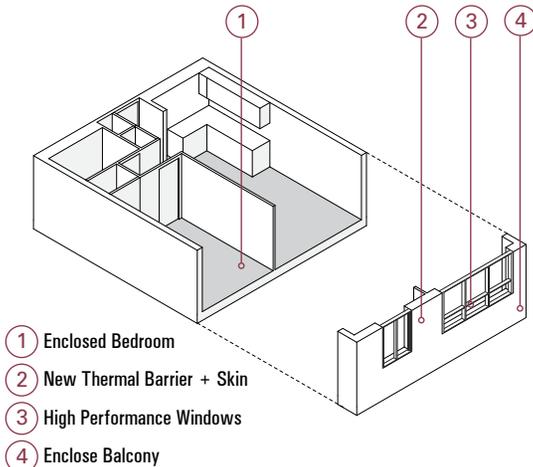
01 ENCLOSE BALCONIES

The balconies are rarely used and are a major source of air and water infiltration. By enclosing the balconies and installing new high performance windows, we can decrease heat loss and increase usable interior space, allowing us to convert studios into 1-bedroom units.

EXISTING UNIT FACADE

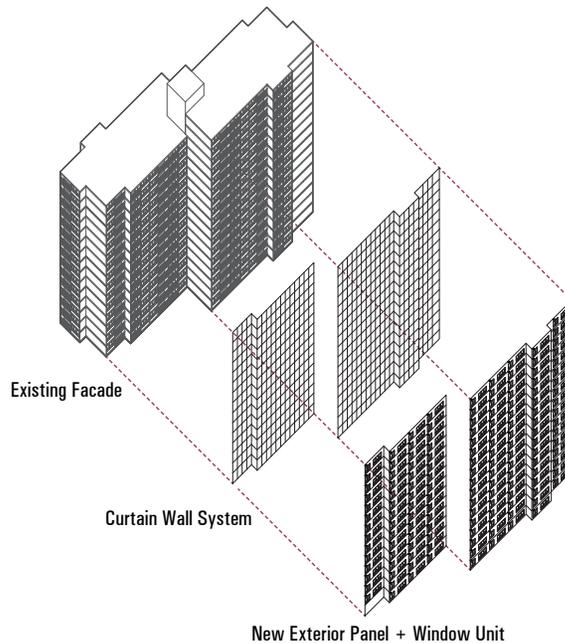


PROPOSED UNIT FACADE



02 RECLAD EXTERIOR

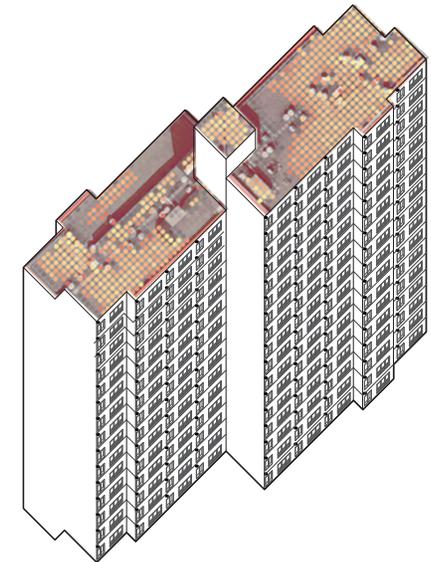
The building will be reclad with high performance materials decrease heat loss. To minimize disturbance to an occupied building, the new curtain wall skin would be added to the exterior of the existing skin and once the entire envelope is finished, the windows and balcony handrails would be removed as interior construction.



03 SOLAR PANELS

Solar panels covering an area of 8500 square feet (62% of the roof area) will be added to the roof of the existing towers allowing the project to generate an average of 155,725 kWh/y. The other portions of the roof not used for solar panels will be painted in a white high reflectivity coating.

- **96 US tons of CO2 Offset**
- **30% reduction in electricity costs**
- **25% reduction for gas, heat and hot water**



Adding **500** solar PV panels will provide an inflationary hedge for future energy costs, reduce long term operating costs and exceed CHA's overall goal to generate **15%** of their electricity consumption on site.

UNIT

WASTE REDUCTION & EFFICIENCY

Bearing in mind that the target tenants are seniors, Millers Court units are designed to be hazard-free and “smart,” with bathroom showers instead of bath tubs, and appliances that are easy to operate or that run on sensors.

These features ensure user comfort and familiarity, and reduce any learning curve needed to use them. In addition, having “smart” appliances also contributes to energy savings and reduces wastage, which makes the building cheaper to operate over the long run.

UNIT STRATEGY

REDUCED WATER USAGE



- Low Flow Toilets
- High Efficiency Fixed Mount Showerheads
- High Efficiency Faucets
- Walk-in Showers

COMFORT

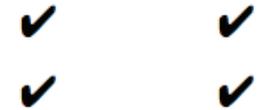
EFFICIENCY



INCREASED NATURAL LIGHTING



- Large Picture Windows in Living Spaces
- Bright Interior finishes and Colors that reflect diffuse natural light



IMPROVED THERMAL COMFORT



- Operable Turn-and-Tilt Casement Windows for Natural Ventilation
- Tightly Sealed Composite Window Frames
- Triple Pane Low-Emission Coated Window Panels
- Five-Inch Insulated Walls (R-value: 6.5/inch)



METRICS

Enterprise Green Communities and Smart Growth

GREEN CERTIFICATION

Millers Court (new construction) achieves 88 optional points above the baseline mandatory criteria for the 2015 Enterprise Green Communities Certification. The substantial rehabilitation and new construction mixed-use block will achieve compliance with all mandatory Enterprise Green Communities Criteria and will achieve 48 points and 61 points respectively.

SMART GROWTH

Millers Court exemplifies the principles of smart growth as a dense, mixed-use TOD urban infill development that serves to increase the income diversity of its neighborhood. The design is compact and walkable, delivering 366 units in the heart of East Cambridge's main street district.

2015 ENTERPRISE GREEN COMMUNITIES CHECKLIST

1.0 Integrative Design		
M	1.1a	Goal Setting
M	1.1a	Goal Setting
M	1.1b	Criteria Documentation
9 of 9	1.1c	Designing for Project Performance
M	1.2a	Resident Health and Well-Being: Design for Health
M	1.3a	Resilient Communities: Design for Resilience
2.0 Location + Neighborhood Fabric		
M	2.1	Sensitive Site Protection
M	2.2	Connections to Existing Development and Infrastructure
M	2.3	Compact Development
M	2.5	Proximity to Services
2 of 6	2.7	Preservation of and Access to Open Space
10 of 8	2.8	Access to Public Transportation
8 of 8	2.9	Improving Connectivity to the Community
6 of 6	2.12	Access to Fresh, Local Foods
3.0 Site Improvements		
M	3.1	Environmental Remediation
M	3.2	Erosion and Sedimentation Control
M	3.3	Low-Impact Development
M	3.4	Landscaping
M	3.5a	Efficient Irrigation and Water Reuse

4.0 Water Conservation		
M	4.1	Water-Conserving Fixtures
6 of 6	4.2	Advanced Water Conservation
4 of 4	4.3	Leaks and Water Metering
5.0 Energy Efficiency		
M	5.1b	Building Performance Standard
5 of 12	5.2	Additional Reductions in Energy Use
M	5.3	Sizing of Heating and Cooling Equipment
M	5.4	Energy Star Appliances
M	5.5	Lighting
6 of 6	5.6	Electricity Meter
6 of 6	5.7b	Renewable Energy
6.0 Materials		
M	6.1	Low/No VOC Paints, Coatings and Primers
M	6.2	Low/No VOC Adhesive and Sealants
M	6.6	Composite Wood Products that Emit Low/No Formaldehyde
M	6.7a	Environmentally Preferable Flooring
M	6.8	Mold Prevention: Surfaces
M	6.9	Mold Prevention: Tub and Shower Enclosures

7.0 Healthy Living Environment		
M	7.1	Ventilation
M	7.2	Clothes Dryer Exhaust
M	7.3	Combustion Equipment
M	7.5	Vapor Retarder Strategies
M	7.6	Water Drainage
M	7.7	Mold Prevention: Water Heaters
M	7.8	Radon Mitigation
M	7.9	Garage Isolation
M	7.10	Integrated Pest Management
M	7.12	Active Design: Promoting Physical Activity Within the Building
9 of 9	7.14	Indoor & Outdoor Activity Spaces for Children & Adults
10 of 10	7.16	Smoke-Free Building
8.0 Operations, Maintenance + Resident Engagement		
M	8.1	Building Operations & Maintenance Manual and Plan
M	8.2	Emergency Management Manual
M	8.3	Resident Manual
M	8.4	Resident and Property Staff Orientation
M	8.5	Project Data Collection and Monitoring System: 100% Owner-aid Utility Accounts
M		Mandatory requirement
TOTAL		
88 Points	New Construction must reach 35 optional points. Substantial Rehab must reach 30 optional points.	

05 FINANCIALS

Key Financial Metrics

Deal Structure

Sources & Uses

Operating Budget

20 Year Pro Forma

Phasing & Development Timeline

“The main strategy in justifying the need for subsidies is to emphasize how far the public money will go. The key thing is to demonstrate how many affordable units the project will yield for the community, given the same

KEY FINANCIAL METRICS

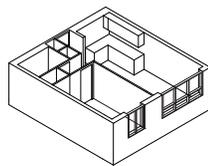
AT A GLANCE

FINANCIAL SUMMARY

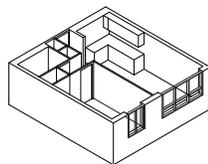
The development proposal for Millers Court is estimated to cost \$170.7 million over a development period of 6 years, with a full-build out of 366 low-income residential units and 32,000 sq ft of mixed-use space achieved by 2022.

The development will have 3 phases, and development costs will be incurred in accordance with these phases. For development costs associated with the low-income residential units, the construction/rehabilitation costs will be funded through a combination of public subsidies, LIHTC equity, permanent debt and equity contributions from the CHA. For the mixed-use block, the development costs will be funded through a combination of hard debt and developer equity.

CONSTRUCTION COST PER UNIT



New Wing
TDC Per Unit
\$385,300



Renovated Building
TDC Per Unit
\$323,770

DEVELOPMENT PROGRAM SUMMARY

NEW WING	
1BR	48 units
2BR	36 units
4BR	2 units
Millers Court Community Center	7197 ft ²
EXISTING BUILDING	
1BR	279 units
2BR	1 units
MIXED-USE BLOCK	
Retail	3,795 ft ²
Office	22,790 ft ²
East Cambridge Senior Center	5,177 ft ²
PARKING	
	168 Spaces

RESIDENTIAL INCOMES

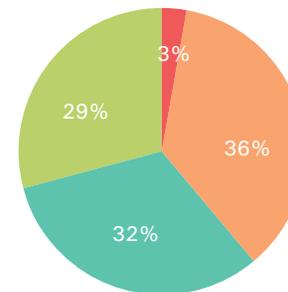
2016 120% Cambridge FMR 2% Yearly Growth Factor	2016 Base Year	2019 New Wing Lease Up	2022 Existing Building Lease-Up
0 BD	\$1,267	n/a	n/a
1BD	\$1,513	\$1,606	\$1,704
2BD	\$1,880	\$1,995	\$2,118
4BD (Community Based Housing*)	\$5,069	\$5,379	n/a

*Community Based Housing units are rented out as 4 separate bedrooms, each bedroom charging the same rent as a 0-bedroom.

COMMERCIAL INCOMES

2019 Non-residential Parking Income	\$180 per space	55 parking spaces are available for guest and tenant parking
2021 Mixed-use Block Incomes		
Retail	\$38.63 psf	Two tenant spaces are available with street frontage along Cambridge Street.
Office	\$49.68 psf	Potential non-profit office tenants: Cambridge Health Alliance (1493 Cambridge Street); American Friends Service Committee (2161 Mass Ave); Caring Companion Home Care (Concord, MA)
East Cambridge Community Center	\$1.07 psf	Potential operators: Citywide Senior Center (806 Mass Ave); Somerville-Cambridge Elder Services (237 Franklin Street)

TOTAL DEVELOPMENT COST BREAKDOWN



TOTAL DEVELOPMENT COST	
	\$170,724,604
Soft Debt/Public Subsidies	\$4,800,000
Hard Debt	\$60,798,834
LIHTC Equity	\$55,446,076
Equity	\$49,677,574

DEAL STRUCTURE

FINANCIAL INNOVATION

'CONDO-IZING' THE PROJECT

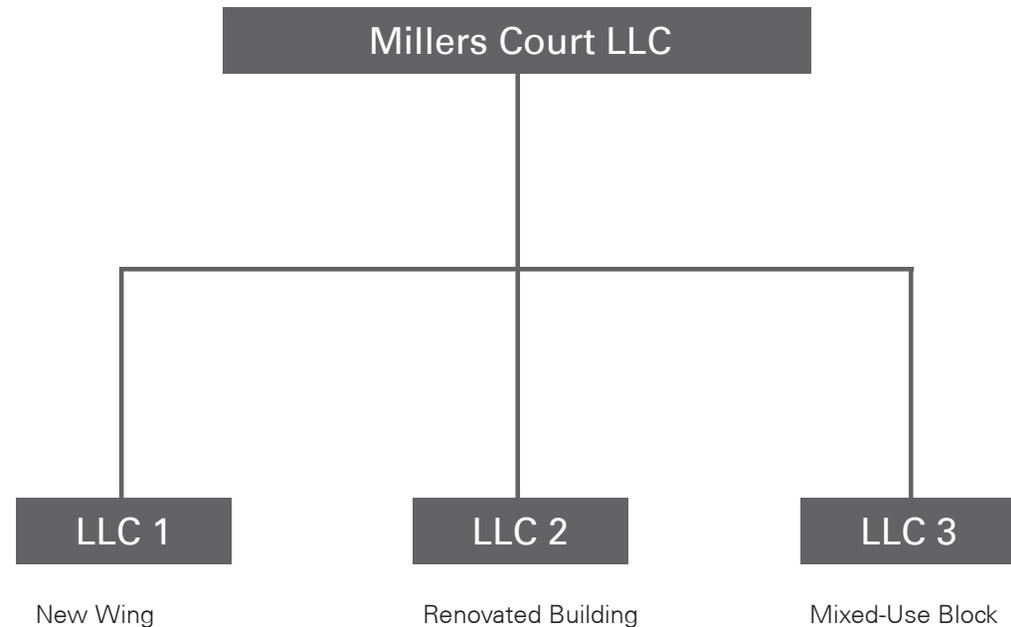
Given the scale of the site at 1.65 acres and the density of the Millers Court project, it is unlikely that the CHA will be able to secure sufficient permanent debt from lenders or raise enough equity internally to meet the funding needs of the entire project.

One **KEY INNOVATION** is for CHA to **'CONDO-IZE'** the project into three separate pieces, congruent to the project phasing, and to have each condo piece be funded on its own as if it were a standalone project. Under the Millers Court LLC will be 3 individual LLCs. Any positive cash flow from each LLC flows up to the parent LLC.

One key driver to 'condo-ize' the Millers Court comes from the desire and need to access more public funds by allowing three separate applications for public subsidies and LIHTC equity within one site. The applications will be spread over three years: 2016, 2017 and 2019. The concern that this approach may not be appropriate is nullified by the efficiency in which the public grants and subsidies are utilized, due to the scale of the project.

In short, the public agencies get **'more bang for the buck'** because of the scale of Millers Court. The CHA has not structured a public housing project in this way, but conversations with them indicate that they are open to considering this approach.

INNOVATIVE LLC STRUCTURE



SOURCES AND USES

CAPITAL SOURCES AND DEVELOPMENT BUDGET

SOURCES

	New Wing		Renovated Building		Mixed Use Block	
	Total	Per unit	Total	Per unit	Total	Per ft ²
Soft Debt						
MA Affordable Housing Trust Fund	\$1,000,000	\$11,628	\$100,000	\$357	\$-	\$-
Cambridge Affordable Housing Trust Fund	\$500,000	\$5,814	\$-	\$-	\$-	\$-
Cambridge CDBG	\$500,000	\$5,814	\$100,000	\$357	\$500,000	\$-
Cambridge HOME	\$500,000	\$5,814	\$100,000	\$357	\$-	\$-
CATHNP	\$650,000	\$7,558	\$-	\$-	\$-	\$-
Housing Innovations Fund	\$-	\$-	\$100,000	\$357	\$-	\$-
FHLB Affordable Housing Program	\$500,000	\$5,814	\$-	\$-	\$-	\$-
CBH Program Loan	\$250,000	\$2,907	\$-	\$-	\$-	\$-
Total Soft Debt	\$3,900,000	\$45,349	\$400,000	\$1,429	\$500,000	\$-
Hard Debt						
Permanent Loan/TE Bonds	\$15,753,835	\$183,184	\$36,690,071	\$131,036	\$8,354,927	\$263
LIHTC Equity						
LIHTC 9% equity	\$10,300,000	\$119,767	\$-	\$-	\$-	\$-
LIHTC 4% equity	\$-	\$-	\$45,146,076	\$161,236	\$-	\$-
Equity						
Deferred Developer Fee	\$3,185,076	\$37,036	\$8,414,134	\$30,050	\$1,257,572	\$40
CHA Sponsor Loan for Acquisition	\$-	\$-	\$35,000,000	\$125,000	\$-	\$-
CHA Program Note	\$-	\$-	\$-	\$-	\$1,820,792	\$57
Total Equity	\$3,185,076	\$37,036	\$43,414,134	\$155,050	\$3,078,364	\$97
TOTAL SOURCES	\$33,135,834	\$385,300	\$125,655,479	\$448,770	\$11,933,291	\$376

USES

	New Wing		Renovated Building		Mixed Use Block	
	Total	Per unit	Total	Per unit	Total	Per ft ²
Acquisition Cost						
Land	\$1	\$0.01	\$1	\$0	\$1	\$0
Units (funded thru CHA-Sponsor Loan)			\$35,000,000	\$125,000		
Construction Cost						
Hard Costs						
Demolition	\$-	\$-	\$-	\$-	180,000	\$6
Rehab Work	\$-	\$-	\$52,868,400	\$188,816	\$-	\$-
FF&E	\$-	\$-	\$15,331,836	\$54,757	\$-	\$-
Construction (Residential)	\$22,465,917	\$261,232			\$8,893,360	\$280
Construction (Parking)	\$3,056,000	\$35,535				\$-
Soft Costs						
Architecture/Engineering	\$898,637	\$10,449	\$2,728,009	\$9,743	\$362,934	\$11
Landscaping	\$300,000	\$3,488	\$-	\$-	\$-	\$-
Financing Fees						
Fees on Construction Loan	\$157,538	\$1,832	\$366,901	\$1,310	\$83,549	\$3
Fees on Permanent Loan	\$78,769	\$916	\$183,450	\$655	\$83,549	\$3
Carrying Costs						
Construction Loan Interest	\$1,063,384	\$12,365	\$4,953,160	\$17,690	\$563,958	\$18
Relocation	\$-	\$-	\$1,000,000	\$3,571	\$-	\$-
Other Costs						
Contingency	\$1,401,012	\$16,291	\$3,871,588	\$13,827	\$508,367.58	\$16
Capitalized Replacement Reserve	\$21,500	\$250	\$98,000	\$350	\$-	\$-
LIHTC Syndication Fees	\$258,000	\$3,000	\$840,000	\$3,000	\$-	\$-
Developer's Fee	\$3,185,076	\$37,036	\$8,414,134	\$30,050	\$1,257,572	\$40
Total Development Cost	\$33,135,834	\$385,300	\$125,655,479	\$448,770	\$11,933,291	\$376
TDC Net of Sponsor Loan	\$33,135,834	\$385,300	\$90,655,479	\$323,770	\$11,933,291	\$376

SOURCES OF FUNDS

SOFT DEBT

SOFT DEBT

All 366 units are reserved for tenants with incomes below the 60% of area median income (AMI), a majority of which are set aside for dual-eligible seniors (eligible for public housing and Medicaid). Because these residents will benefit from the service-enriched public housing that CHA will provide, Millers Court fulfills the program goals of many affordable housing funds. The total amount of subsidies required for the residential blocks is \$4.3 mil, which translates into a very efficient subsidy level of \$11,800 per unit. These subsidies will cover 3% of total development costs (TDC).

Massachusetts Affordable Housing Trust Fund

The MA AHT fund is administered by MassHousing and has a cap of \$1 million per project. This project requires a \$1 million allocation for the construction of the new wing (\$11,628 per unit) and a \$100,000 allocation for the rehabilitation of the existing building (\$357 per unit).

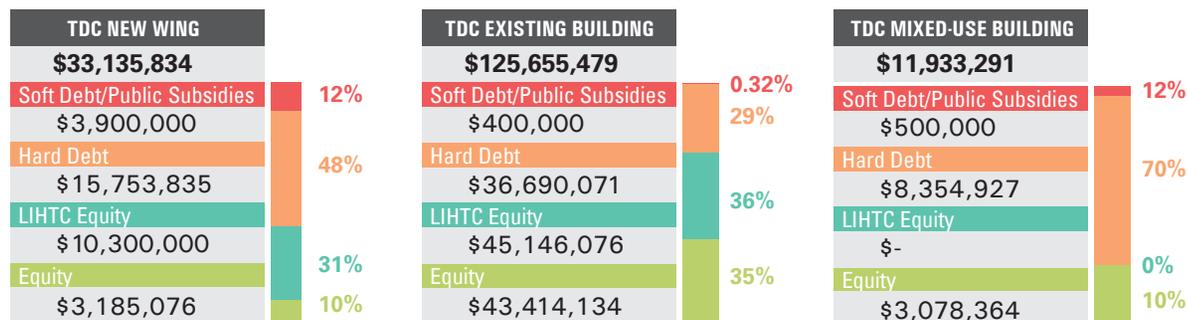
Cambridge Affordable Housing Trust Fund

Funded by the Community Preservation Act, Incentive Zoning fund and the Harvard University 20/20/2000 Initiative, the Cambridge AHT aims to create and preserve long-term housing affordability for residents earning below 80% AMI. With 38 family-sized units in the new wing, this project fulfills the City of Cambridge's emphasis on family housing and requires a \$500,000 allocation for the new wing. The subsidy per unit is \$5,814.

Cambridge Community Development Block Grants

Cambridge has been allocated an average of \$2.5 million to \$3.5 million per fiscal year from federal CDBG funds. This project fulfills program goals by creating a new network of open spaces for senior residents, and by expanding social services through the Millers Court Community Center and the East Cambridge Senior Center. Priority for office space in the mixed-use block will be given to non-profit groups working on issues related to seniors. This project anticipates receiving a \$500,000 allocation for the new wing, \$100,000 for the rehabilitation of the existing building and \$500,000 for the mixed-use block.

CAPITAL STACK



Cambridge Home Investment Partnership Program

The Cambridge HOME program has been allocated an average of over \$1 million a year over the past five years and has created 217 affordable housing units over that period. This project alone will create/preserve 366 affordable senior units by 2020. An allocation of \$500,000 for the new wing and \$100,000 for the existing building is anticipated.

Commercial Area Transit Node Housing Program

The CATNHP fund is administered by the DHCD and offers assistance to housing units in proximity to a public transit node. CATNHP is a 0% interest 30-year deferred payment loan which is capped at \$750,000 per project. Millers Court is located along the route of Bus Service 69. \$650,000 of CATNHP funding is requested for the construction of the new wing, representing a subsidy of \$7,558 per unit.

Housing Innovations Fund (HIF)

DHCD makes HIF funds available twice-yearly for the creation/preservation of alternative forms of affordable housing. HIF is a 0% interest 30-year deferred payment loan which is capped at \$500,000 per project. With Millers Court pioneering a new serviced-enriched typology of public housing for low-income seniors, a funding request of \$100,000 for the rehabilitation of the existing building is anticipated. The subsidy per unit is \$357.

Federal Home Loan Bank Affordable Housing Program

Correspondence with staff at FHLB Boston indicates that there has been a one-time increase in the funding limit to \$750,000 for a direct subsidy and \$1.5 mil in total subsidies in 2016. The longest FHLB AHP loan available is a fixed-rate loan with a 20-year term and 30-year amortization. A project subsidy of \$500,000 for the new wing is anticipated. The subsidy per unit is \$5,814.

Community Based Housing Program Loan

The CBH program is intended to create housing units that cater to persons with permanent disabilities who are at risk of institutionalization. Housing units funded by CBH facilitate the housing of residents in need of long and continuous care and treatment. CBH is a 0% interest 30-year deferred payment loan which is capped at \$750,000 per project.

Two units with 4-bedrooms each have been created on top of the residents' community center as part of the construction of the new wing. Bedrooms in these units can be rented to non-related residents with care services centralized in the units itself. CBH funding of \$250,000 for the construction of the new wing is anticipated. The subsidy is \$2,907 per unit.

SOURCES OF FUNDS

LIHTC EQUITY AND HARD DEBT

FEDERAL LOW INCOME HOUSING TAX CREDIT

Millers Court is eligible for LIHTC credits as 100% of the residential units on site are rental units for low-income residents earning 60% or lower of AMI. The construction of a new wing of 86 units is eligible for the 9% annual credits and the rehabilitation of the 280 units in the existing building is eligible for the 4% annual credits

LIHTC 9% credits

Given the good reputation of the CHA and a longer planning and design phase of 18 months for the first of the project, there is a strong likelihood that CHA will be able to secure the 9% credits within the 2016 - 2017 and 2017 - 2018 funding cycles.

The 9% credits also enjoy a basis boost of 130% because the project is deemed to be in a "Difficult Development Area" which is defined by HUD as an area with "high construction, land, and utility costs related to area median gross income." Construction costs related to any parking spaces created for non-residential use have been excluded from basis.

The 9% credits are syndicated at a 1.03 yield, which MHIC views as likely for this type of project in the current market environment. Capped at a \$1,000,000 allocation, the 9% LIHTC credits yielded for the construction project totals \$10,300,000 in equity.

LIHTC 4% credits

4% credits are not allocated on a competitive basis and it is expected that this source of funding will be available. While the 4% credits are not allowed a basis boost to raise the amount of LIHTC equity available, current regulations allow the inclusion of non-land acquisition costs into the total development costs for the rehabilitation of the main wing as a secondary method of boosting the eligible basis. A CHA-provided estimate of \$125,000 per unit of non-land acquisition costs results in a basis boost of \$35 million within the TDC, and results in an estimated 4% equity of \$45.1 million (syndicated at a 1.14 yield).

LIHTC CALCULATORS

	New Wing (9% credits)		Reno Building Rehab (4% credits)	
	Total	Per unit	Total	Per unit
Total Development Cost	\$33,135,834	\$385,300	\$125,655,479	\$448,770
Less: Acquisition	\$1	\$0.01	\$1	\$0.00
Less: Marketing Costs	\$-	\$-	\$-	\$-
Less: Permanent Financing + Tax Credit Fees	\$336,769	\$3,916	\$1,023,450	\$3,655
Less: Reserves	\$21,500	\$250	\$98,000	\$350
Less: Construction costs for gross comm bldg	\$1,205,600	\$14,019	\$-	\$-
LIHTC Eligible Costs	\$31,571,964	\$367,116	\$124,534,028	\$444,764
Less: Non-eligible financing	\$-	\$-	\$-	\$-
Eligible Basis	\$31,571,964	\$367,116	\$124,534,028	\$444,764
Applicable Fraction	1.00		1.00	
Basis Boost Multiplier (for 9% only)	1.30		1.00	
Adjusted Qualified Basis	\$41,043,553	\$477,251	\$124,534,028	\$444,764
Tax Credit Rate	9.00%		3.18%	
Annual Credits	\$3,693,920	\$42,953	\$3,960,182	\$14,144
DHCD per project cap	\$1,000,000	\$11,628	\$1,000,000	\$3,571
Total Credits over 10 years (per DHCD cap 9% only)	\$10,000,000	\$116,279	\$39,601,821	\$141,435
Price Per Credit	\$1.03		\$1.14	
4% or 9% Syndication Proceeds	\$10,300,000	\$119,767	\$45,146,076	\$161,236

HARD DEBT / PRIVATE LOANS

Brookline Bank Permanent Loan

Three permanent loans totalling up to \$60.8 million are required to fund the three separate projects. The estimated Loan-to-Cost ratio is 36% at the project level. The loan amounts calculated for each project are the maximum supportable loans based on a debt service coverage ratio of 1.2, with a 30-year amortization term and a fixed-rate of 4.75%. Discussions with local financial experts and advisers at Brookline Bank indicate that long-term HUD-insured loans for affordable housing are currently closing in the range of 4.5% to 5%.

Because of CHA's great track record and reputation among lenders, CHA has indicated that it is able to secure loans with favorable terms. In that respect, a lower interest rate within the range currently used in the market was chosen and the permanent loan commitment fees were lowered to 0.5 point from the typical 1 point.

Construction Loan

Three construction loans totalling up to \$60.8 million will be required to fund the three separate projects. Discussions with local financial experts indicate that interest rates on short-term construction loans in a low-interest rate environment are lower than that of permanent loans.

Currently, construction loans are floating at 30-day LIBOR +100/150 basis points. As such, a construction loan interest rate of 4.5% is estimated for the 18-month new wing construction loan, the 3-year rehabilitation construction loan and the 18-month construction loan for the new mixed-use block.

LOAN BREAKDOWN

Loan Type	New Wing	Renovated Bldg	Mixed-Use
Construction	\$ 15,753,835	\$ 36,690,071	\$ 8,354,927
Permanent	\$ 15,753,835	\$ 36,690,071	\$ 8,354,927

SOURCES OF FUNDS

EQUITY AND EXPENSES

EQUITY

Deferred Developer Fees

Deferred developer fees are also tapped on as a source of funds to reduce the project's reliance on public subsidies and grants. CHA calculates its deferred developer's fees as follows: 5% of land acquisition costs, 15% of costs up to \$3 million, 12.5% of costs from \$3 million to \$5 million, 10% of costs above \$5 million.

The developer's fees are \$3.19 million for the new wing; \$8.4 million for the existing building and \$1.26 million for the mixed-use block.

CHA Sponsor Loan for Acquisition

A line item for a non-land acquisition cost has been included as a CHA Sponsor Loan for Acquisition within the sources of funds for the costs of rehabilitating the existing building. The \$125,000 per unit cost, adding up to \$35 million for the entire building, is deemed a reasonable valuation for these 40-year-old units, in the absence of any fair market valuation.

This source of funds has been included to allow a boost in the eligible basis in obtaining 4% LIHTC credits, and is also recorded as an Acquisition cost within the development budget, and does not represent a capital outflow for CHA.

CHA Program Note – Banking Net Cash Flows

Another innovation employed in the funding structure of the project is the use of a CHA Program Note as a source of funds for the construction of the new mixed-use block. As the mixed-use block consists of retail and office space and the East Cambridge Senior Center, it is not eligible for many of the affordable housing subsidies, other than the Cambridge Community Development Block Grant (primarily used to fund the construction of the community center).

Even after using CDBG funds, the maximum supportable mortgage and deferred developer fees to fund the construction costs of the mixed-use block, there is still a funding shortfall of \$1.8 million in the project costs for

OPERATING EXPENSES

	New Wing		Renovated Building		Mixed Use Block	
	Total	Per unit	Total	Per unit	Total	Per ft ²
Administrative Costs	\$180,600	\$2,100	\$588,000	\$2,100	\$35,000	\$1.10
Management Fee	\$68,800	\$800	\$263,200	\$940	\$45,000	\$1.42
Maintenance Costs	\$229,018	\$2,663	\$745,640	\$2,663	\$58,000	\$2
Utilities						
Electricity	\$34,400	\$400	\$117,252	\$419	\$-	\$-
Gas, Heat and Hot Water	\$38,700	\$450	\$126,000	\$450	\$-	\$-
Water and Sewer	\$24,080	\$280	\$78,400	\$280	\$50,000	\$1.57
Payment in Lieu of Taxes	\$15,000	\$174	\$55,000	\$196	\$50,000	\$1.57
Insurance	\$68,800	\$800	\$224,000	\$800	\$80,000	\$2.52
Replacement Reserves	\$43,860	\$510	\$142,800	\$510	\$10,000	\$0.31
Other: General Expenses	\$2,150	\$25	\$7,000	\$25	\$5,000	\$0.16
TOTAL OPEX	\$705,408	\$8,202	\$2,347,292	\$8,383	\$333,000	\$10.48

the mixed-use piece. Hence, we anticipate that a CHA Program Note can be generated from funds banked from any positive net cash flow in the period before construction starts in 2020. CHA will then commit these funds as equity contribution to pay for the construction of the mixed-use building. The positive net cash flow generated between June 2016 and 2017 is sufficient to meet this capital requirement.

BUILDING EXPENSES

The per unit yearly maintenance cost for units in the new wing is \$8,202 and that for units in the rehabilitated existing building is \$8,383. As a percentage of effective gross incomes, the maintenance costs of these buildings range from 41% to 50%.

These operating costs include a **30% savings in electricity** due to the **power purchasing agreement** from a solar **PV cell** operator, who will lease space on the rooftop of the existing building to install **PV cells**. A \$473,000 upfront capital cost for the installation of these PV cells will be borne by the operator, which is estimated to have an 8-year payback period. In addition, utilizing the principles of sustainable design in the building envelope results in a **24% savings in gas, heat and hot water**.

The mixed-use block has an OpEx of \$333,000 a year, consisting of 39% of the building's effective gross incomes. Operational costs are escalated at 3% a year, at CPI.

20 YEAR PROFORMA

TIMEFRAME 2016-2025

Assumptions

Rental growth	2%	Renovated Building	\$36,690,071
Vacancy		New Wing + Parking	\$15,753,835
Section 8 PBV	3%	Mixed Use Block	\$8,354,927
Retail, Office, Parking	5%		
Operation expenses	3%	35 Year Rate	4.75%
Debt service coverage ratio	1.2	Term (Years)	30

#	1	2	3	4	5	6	7	8	9	10
Year	From 06/2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GROSS INCOMES										
New Wing	\$-	\$-	\$-	\$1,916,104	\$1,954,426	\$1,993,514	\$2,033,384	\$2,074,052	\$2,115,533	\$2,157,844
Renovated Building	\$2,638,801	\$4,614,132	\$4,706,415	\$3,200,362	\$3,264,369	\$3,329,657	\$5,730,768	\$5,845,384	\$5,962,292	\$6,081,537
Mixed Use Block	\$-	\$-	\$-	\$-	\$-	\$529,008	\$1,079,177	\$1,100,761	\$1,122,776	\$1,145,231
Parking	\$-	\$-	\$-	\$118,368	\$120,735	\$123,150	\$125,613	\$128,125	\$130,688	\$133,302
TOTAL	\$2,638,801	\$4,614,132	\$4,706,415	\$5,234,834	\$5,339,530	\$5,975,329	\$8,968,943	\$9,148,322	\$9,331,288	\$9,517,914
VACANCY										
New Wing	\$-	\$-	\$-	\$(57,483)	\$(58,633)	\$(59,805)	\$(61,002)	\$(62,222)	\$(63,466)	\$(64,735)
Renovated Building	\$(79,164)tv	\$(138,424)	\$(141,192)	\$(96,011)	\$(97,931)	\$(99,890)	\$(171,923)	\$(175,362)	\$(178,869)	\$(182,446)
Mixed Use Block	\$-	\$-	\$-	\$-	\$-	\$(26,450)	\$(53,959)	\$(55,038)	\$(56,139)	\$(57,262)
Parking	\$-	\$-	\$-	\$(5,918)	\$(6,037)	\$(6,158)	\$(6,281)	\$(6,406)	\$(6,534)	\$(6,665)
TOTAL	\$(79,164)	\$(138,424)	\$(141,192)	\$(159,412)	\$(162,601)	\$(192,303)	\$(293,164)	\$(299,027)	\$(305,008)	\$(311,108)
EFFECTIVE GROSS INCOMES										
New Wing	0	\$-	\$-	\$1,858,620	\$1,895,793	\$1,933,709	\$1,972,383	\$2,011,831	\$2,052,067	\$2,093,109
Renovated Building	\$2,559,637	\$4,475,708	\$4,565,223	\$3,104,351	\$3,166,438	\$3,229,767	\$5,558,845	\$5,670,022	\$5,783,423	\$5,899,091
Mixed Use Block	\$-	\$-	\$-	\$-	\$-	\$502,558	\$1,025,218	\$1,045,723	\$1,066,637	\$1,087,970
Parking	\$-	\$-	\$-	\$112,450	\$114,699	\$116,993	\$119,332	\$121,719	\$124,153	\$126,637
TOTAL	\$2,559,637	\$4,475,708	\$4,565,223	\$5,075,421	\$5,176,930	\$5,783,026	\$8,675,779	\$8,849,295	\$9,026,281	\$9,206,806
OPERATING COSTS										
New Wing	\$-	\$-	\$-	\$(770,818)	\$(793,943)	\$(817,761)	\$(842,294)	\$(867,563)	\$(893,590)	\$(920,397)
Renovated Building	\$(2,347,292)	\$(2,417,711)	\$(2,490,242)	\$(1,709,966)	\$(1,761,265)	\$(1,814,103)	\$(2,802,789)	\$(2,886,873)	\$(2,973,479)	\$(3,062,684)
Mixed Use Block	\$-	\$-	\$-	\$-	\$-	\$(193,019)	\$(397,619)	\$(409,548)	\$(421,834)	\$(434,489)
Parking	\$-	\$-	\$-	\$(16,867)	\$(17,373)	\$(17,895)	\$(18,432)	\$(18,984)	\$(19,554)	\$(20,141)
TOTAL	\$(2,347,292)	\$(2,417,711)	\$(2,490,242)	\$(2,497,652)	\$(2,572,582)	\$(2,842,778)	\$(4,061,134)	\$(4,182,968)	\$(4,308,457)	\$(4,437,711)
NET OPERATING INCOME										
New Wing	\$-	\$-	\$-	\$1,087,802	\$1,101,850	\$1,115,948	\$1,130,089	\$1,144,268	\$1,158,477	\$1,172,711
Renovated Building	\$212,345	\$2,057,998	\$2,074,980	\$1,394,385	\$1,405,173	\$1,415,664	\$2,756,056	\$2,783,149	\$2,809,943	\$2,836,408
Mixed Use Block	\$-	\$-	\$-	\$-	\$-	\$309,539	\$627,599	\$636,175	\$644,803	\$653,480
Parking	\$-	\$-	\$-	\$95,582	\$97,325	\$99,098	\$100,901	\$102,735	\$104,599	\$106,496
TOTAL	\$212,345	\$2,057,998	\$2,074,980	\$2,577,769	\$2,604,348	\$2,940,248	\$4,614,645	\$4,666,326	\$4,717,823	\$4,769,095
DEBT SERVICE										
New Wing + Parking	\$-	\$-	\$-	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)
Renovated Building	\$-	\$-	\$-	\$-	\$-	\$-	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)
Mixed Use Block	\$-	\$-	\$-	\$-	\$-	\$(261,500)	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)
TOTAL	\$-	\$-	\$-	\$(986,154)	\$(986,154)	\$(1,247,653)	(3,805,866)	(3,805,866)	(3,805,866)	(3,805,866)
<i>DSCR</i>	0	0	0	2.61	2.64	2.36	1.21	1.23	1.24	1.25
NET CASH FLOW	\$212,345	\$2,057,998	\$2,074,980	\$1,591,616	\$1,618,195	\$1,692,595	\$808,779	\$860,460	\$911,957	\$963,229

20 YEAR PROFORMA

TIMEFRAME 2026-2035

#	11	12	13	14	15	16	17	18	19	20
Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
GROSS INCOMES										
New Wing	\$2,201,001	\$2,245,021	\$2,289,921	\$2,335,720	\$2,382,434	\$2,430,083	\$2,478,684	\$2,528,258	\$2,578,823	\$2,630,400
Renovated Building	\$6,203,168	\$6,327,231	\$6,453,776	\$6,582,852	\$6,714,509	\$6,848,799	\$6,985,775	\$7,125,490	\$7,268,000	\$7,413,360
Mixed Use Block	\$1,168,136	\$1,191,499	\$1,215,329	\$1,239,635	\$1,264,428	\$1,289,717	\$1,315,511	\$1,341,821	\$1,368,658	\$1,396,031
Parking	\$135,968	\$138,687	\$141,461	\$144,290	\$147,176	\$150,119	\$153,122	\$156,184	\$159,308	\$162,494
TOTAL	\$9,708,272	\$9,902,438	\$10,100,487	\$10,302,496	\$10,508,546	\$10,718,717	\$10,933,092	\$11,151,753	\$11,374,789	\$11,602,284
VACANCY										
New Wing	\$(66,030)	\$(67,351)	\$(68,698)	\$(70,072)	\$(71,473)	\$(72,902)	\$(74,361)	\$(75,848)	\$(77,365)	\$(78,912)
Renovated Building	\$(186,095)	\$(189,817)	\$(193,613)	\$(197,486)	\$(201,435)	\$(205,464)	\$(209,573)	\$(213,765)	\$(218,040)	\$(222,401)
Mixed Use Block	\$(58,407)	\$(59,575)	\$(60,766)	\$(61,982)	\$(63,221)	\$(64,486)	\$(65,776)	\$(67,091)	\$(68,433)	\$(69,802)
Parking	\$(6,798)	\$(6,934)	\$(7,073)	\$(7,214)	\$(7,359)	\$(7,506)	\$(7,656)	\$(7,809)	\$(7,965)	\$(8,125)
TOTAL	\$(317,330)	\$(323,677)	\$(330,150)	\$(336,753)	\$(343,488)	\$(350,358)	\$(357,365)	\$(364,513)	\$(371,803)	\$(379,239)
EFFECTIVE GROSS INCOMES										
New Wing	\$2,134,971	\$2,177,670	\$2,221,224	\$2,265,648	\$2,310,961	\$2,357,180	\$2,404,324	\$2,452,410	\$2,501,458	\$2,551,488
Renovated Building	\$6,017,073	\$6,137,415	\$6,260,163	\$6,385,366	\$6,513,073	\$6,643,335	\$6,776,202	\$6,911,726	\$7,049,960	\$7,190,959
Mixed Use Block	\$1,109,729	\$1,131,924	\$1,154,562	\$1,177,654	\$1,201,207	\$1,225,231	\$1,249,735	\$1,274,730	\$1,300,225	\$1,326,229
Parking	\$129,169	\$131,753	\$134,388	\$137,075	\$139,817	\$142,613	\$145,466	\$148,375	\$151,342	\$154,369
TOTAL	\$9,390,942	\$9,578,761	\$9,770,336	\$9,965,743	\$10,165,058	\$10,368,359	\$10,575,726	\$10,787,241	\$11,002,986	\$11,223,045
OPERATING COSTS										
New Wing	\$(948,009)	\$(976,450)	\$(1,005,743)	\$(1,035,915)	\$(1,066,993)	\$(1,099,003)	\$(1,131,973)	\$(1,165,932)	\$(1,200,910)	\$(1,236,937)
Renovated Building	\$(3,154,564)	\$(3,249,201)	\$(3,346,677)	\$(3,447,077)	\$(3,550,490)	\$(3,657,004)	\$(3,766,715)	\$(3,879,716)	\$(3,996,108)	\$(4,115,991)
Mixed Use Block	\$(447,524)	\$(460,950)	\$(474,778)	\$(489,022)	\$(503,692)	\$(518,803)	\$(534,367)	\$(550,398)	\$(566,910)	\$(583,918)
Parking	\$(20,745)	\$(21,367)	\$(22,008)	\$(22,668)	\$(23,348)	\$(24,049)	\$(24,770)	\$(25,514)	\$(26,279)	\$(27,067)
TOTAL	\$(4,570,843)	\$(4,707,968)	\$(4,849,207)	\$(4,994,683)	\$(5,144,524)	\$(5,298,859)	\$(5,457,825)	\$(5,621,560)	\$(5,790,207)	\$(5,963,913)
NET OPERATING INCOME										
New Wing	\$1,186,961	\$1,201,220	\$1,215,480	\$1,229,733	\$1,243,968	\$1,258,177	\$1,272,351	\$1,286,478	\$1,300,549	\$1,314,550
Renovated Building	\$2,862,509	\$2,888,213	\$2,913,486	\$2,938,289	\$2,962,584	\$2,986,330	\$3,009,487	\$3,032,010	\$3,053,853	\$3,074,969
Mixed Use Block	\$662,205	\$670,974	\$679,784	\$688,632	\$697,514	\$706,428	\$715,368	\$724,332	\$733,314	\$742,312
Parking	\$108,424	\$110,385	\$112,379	\$114,407	\$116,468	\$118,564	\$120,695	\$122,861	\$125,063	\$127,302
TOTAL	\$4,820,100	\$4,870,793	\$4,921,129	\$4,971,060	\$5,020,534	\$5,069,500	\$5,117,901	\$5,165,681	\$5,212,779	\$5,259,133
DEBT SERVICE										
New Wing + Parking	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)	\$(986,154)
Renovated Building	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)	\$(2,296,713)
Mixed Use Block	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)	\$(522,999)
TOTAL	\$(3,805,866)									
<i>DSCR</i>	1.27	1.28	1.29	1.31	1.32	1.33	1.34	1.36	1.37	1.38
NET CASH FLOW	\$1,014,234	\$1,064,927	\$1,115,264	\$1,165,194	\$1,214,668	\$1,263,634	\$1,312,035	\$1,359,815	\$1,406,913	\$1,453,267

PHASING & DEVELOPMENT TIMELINE

GAANT CHART

- X Millers Court Project
- X New Wing
- X Renovated Building
- X Mixed-Use Block

	2016		2017				2018				2019				2020				2021				2022				
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
PREDEVELOPMENT																											
Special Permit Filing	X																										
Conceptual Design	X																										
Schematic Design	X																										
Public Hearing for Special Permit		X																									
Design Development		X																									
Construction Documents			X																								
Special Permit Grant			X																								
Contractor Selection				X					X				X														
CONSTRUCTION																											
Building Construction					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Certificate of Occupancy										X											X		X				
Tenant Relocation											X																
FUNDING INTAKE																											
MA Affordable Housing Trust Fund			X	X					X	X																	
Cambridge AHTF			X	X																							
Cambridge CDBG			X	X					X	X			X														
Cambridge HOME					X	X					X	X															
CATHNP					X	X					X	X															
Housing Innovations Fund											X	X															
FHLB Affordable Housing Program							X	X																			
CBH Program Loan							X	X																			
LIHTC Equity					X						X																
Construction Loan Closing				X						X				X													
Permanent Loan Closing											X										X		X				
Deferred Developer Fees											X										X		X				
CHA Program Note														X													
LEASE-UP																											
Lease-up Phase											X											X	X	X			
OPERATIONS																											
New Wing Occupancy/Operations											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Existing Bldg Occupancy/Operations	X	X	X	X	X	X	X	X	X	X													X	X	X	X	X
Mixed-use Blk Occupancy/Operations																						X	X	X	X	X	X

A predevelopment phase of 9 months has been set aside in order to facilitate the application of a Special Permit from the Cambridge Community Development Department. The new wing of Millers Court is anticipated to break ground in the third quarter of 2017 and complete by the end of 2018. Residents in the existing building who are living in the stacks that are slated for rehabilitation will then be moved into the new wing. Upon completion of their previous apartments, residents have a choice to stay in the new wing (subject to availability) or to move back into the rehabilitated existing building. The rehabilitation of the existing building is anticipated to commence in 2019 and complete in 2021, with precautions taken to ensure no is done during quiet hours or during weekends. The final piece of the project, the mixed-use block, will begin construction in early 2020, once sufficient funds from existing operations have been banked into a CHA Program Note. An 18-month construction period is expected for this block. Due to the good street frontage along Cambridge Street and the good foot traffic generated, it is expected that the retail spaces on the first floor and the office spaces above will be absorbed within 6 months, with priority given to non-profit organizations working on senior-living issues. It is envisioned that Millers Court will become a center of senior social services. The full build-out of the development plan is expected to complete at the end of 2021.

06 ACHIEVEMENTS

Project Objectives
Accomplishments



*Millers Court:
Enhancing Community, Empowering Choice,
Engaging Sense, Expanding Support*

MILLERS COURT

Raising the Bar for Aging-in-Place in Public Housing

PROJECT OBJECTIVES

ACCOMPLISHMENTS

ENHANCING CONNECTIONS

MILLERS COURT

...connects residents within the building and within the city.

The addition of a public senior center that serves all of East Cambridge, a publicly open courtyard, new retail amenities, and three floors of new office spaces will serve to catalyze activity on the site. Connections within Millers Court are enhanced physically with a new elevator, improved interior and exterior transitions between spaces, and two community spaces with large open floor plans.

EMPOWERING CHOICE

...empowers low-income seniors to lead their lifestyle of choice.

Through the provision of community spaces of varying sizes and varying levels of sociability, Millers Court can meet the demands of seniors who want to keep fit—in body and mind. New amenities that enable quality senior living at Millers Court include an outdoor terrace, a fully-equipped commercial kitchen, and multiple courtyards. Residents also have access to private study rooms as well as large open community rooms that can larger social events.

ENGAGING SENSES

...engages residents with their physical, social and natural environment.

Natural lighting in lobbies, hallways and units are enhanced through large windows and bright interior finishes and colors. Sensory experiences through patterns, textures, materials provide greater navigability and wayfinding through the complex. Multiple private and public courtyards allow all residents to enjoy the outdoors.

EXPANDING SUPPORT

...supports residents as they grow to need more care.

Millers Court allows seniors in public housing to age in place. Units are built to enable residents to stay in their homes if, over time, they require greater social assistance or healthcare support. This includes creating larger units that provide room for medical equipment or live-in-aides. Through creating a supportive services center on the second floor, the site is able to cluster various social assistance and healthcare services on-site for residents. Community Based Housing Units provides a higher level of care for eligible residents.



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