

# FLEXIBLE CO-LIVING HOUSING FEASIBILITY STUDY

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Study done in collaboration with Gensler and The Pew Charitable Trusts. Funding for this research was provided by Arnold Ventures and The Pew Charitable Trusts.

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# Defining the Problem: Increasing the supply of low-cost housing

Cities across the United States are grappling with a long-term housing affordability crisis. Rising housing costs and a chronic undersupply of affordable housing impact the livelihoods of residents, with significant office inventories remaining vacant and unused. These trends have become more pronounced in the aftermath of the Covid-19 pandemic.

## Housing Affordability and Availability

Nationwide, the median rent reached \$1,411 in July 2024. This is an increase of over 22% since January 2020.<sup>1</sup> Further rent growth has often outpaced wage growth in recent years, worsening affordability. Experts point to chronic undersupply as one of the primary drivers of rising rents. Current regulatory frameworks, policies, and construction typologies are unable to deliver affordable and accessible housing near jobs, transit, and other socioeconomic drivers of economic opportunity, further contributing to increased costs of existing housing as renters compete for limited supply. The number of lower-income renters continues to rise, resulting in renters increasingly priced out of local housing markets.<sup>2</sup>

## Housing Insecurity and Homelessness

With chronic undersupply of housing, and especially low-cost housing, the United States faces housing insecurity and homelessness. In 2023, HUD reported more than 650,000 people experiencing homelessness, a 12% increase from the year prior.<sup>3</sup> Research indicates that homelessness rates are highest in cities with the highest rents, and that homelessness rises when rents rise.<sup>4</sup>

## Vacant Office Stock

While the nation experiences a housing shortage, office occupancy continues to fall as the commercial real estate market responds to declining office demand due to long-term trends and post-Covid demand shifts. National commercial real estate broker CBRE predicts the overall office vacancy rate will rise to around 20% by the end of 2024 as office tenants continue to reduce their space needs.<sup>5</sup> Rising office vacancies threaten the vitality of central business districts and their continued impact on municipal revenue generation, as cities have long relied significantly on commercial property taxes to fund local budgets.

<sup>1</sup> Apartment List July 2024 National Rent Report <https://www.apartmentlist.com/research/national-rent-data>

<sup>2</sup> NLIHC Releases The Gap 2023: A Shortage of Affordable Homes <https://nlihc.org/news/nlihc-releases-gap-2023-shortage-affordable-homes>

<sup>3</sup> HUD January 2023 Point-in-Time Count Report [https://www.hud.gov/press/press\\_releases\\_media\\_advisories/hud\\_no\\_23\\_278](https://www.hud.gov/press/press_releases_media_advisories/hud_no_23_278)

<sup>4</sup> How Housing Costs Drive Levels of Homelessness <https://www.pewtrusts.org/en/research-and-analysis/articles/2023/08/22/how-housing-costs-drive-levels-of-homelessness>

<sup>5</sup> CBRE Office U.S. Real Estate Market Outlook 2024 <https://www.cbre.com/insights/books/us-real-estate-market-outlook-2024/office-occupier>

## Re-Introducing Low-Cost Housing Typologies

The misalignment of housing costs and the housing budgets of renters is worsening, with a record 50% of renters cost-burdened, meaning they spend more than 30% of income on rent.<sup>1</sup> In many cases this is exacerbated by regulatory frameworks that encourage and prioritize construction of market-rate housing that is higher-cost and beyond the means of most renters.

In the mid-20th century, most cities in the U.S. were characterized by an abundance of lower-cost housing typologies, particularly single-room occupancy (SRO) dwellings. Starting in the 1950s, restrictive zoning and building codes and financial incentives resulted in the elimination of SRO's as an affordable housing alternative. Between the 1970s and the 1990s alone, it is estimated that the United States lost one million SRO units to conversions and demolitions.<sup>2</sup>

Through regulatory reform and the reintroduction of lower-cost residential typologies, the supply of lower-cost housing can be increased to meet the current needs of renters.

The reintroduction of flexible co-living residential typologies has the potential to:

- 1) reduce the costs of additional residential inventory,
- 2) increase the supply of available housing to lower-income renters, and
- 3) alleviate some of the negative impacts of long-term demand changes for office properties.

## Expanding the Office-to-Residential Conversion Potential

Central to this solution is the potential for leveraging vacant office stock in city's central business districts, which are already located in transit-accessible and job- and amenity-rich locations. Many of these vacant or underutilized office buildings are being assessed for their potential conversion to housing across the U.S.

Gensler analysis suggests a notable subset of existing office stock is potentially suitable for conversion into market-rate housing.<sup>3</sup> However, many buildings are not economically viable candidates due to configurations that appeal to office tenants, but are incompatible with traditional residential layouts. Large floor plates with little interior natural light, inoperable windows, and the high costs of plumbing and mechanical retrofits all challenge the design and economic feasibility of conversion, particularly under current regulatory frameworks in most cities.



<sup>1</sup>New Report Shows Rent Is Unaffordable for Half of Renters as Cost Burdens Surge to Record Levels <https://www.jchs.harvard.edu/press-releases/new-report-shows-rent-unaffordable-half-renters-cost-burdens-surge-record-levels>

<sup>2</sup>The Rise and Fall of the American SRO <https://www.bloomberg.com/news/articles/2018-02-22/the-rise-and-fall-of-the-american-sro>

<sup>3</sup>What We've Learned by Assessing More Than 1,300 Potential Office-to-Residential Conversions <https://www.gensler.com/blog/what-we-learned-assessing-office-to-residential-conversions>

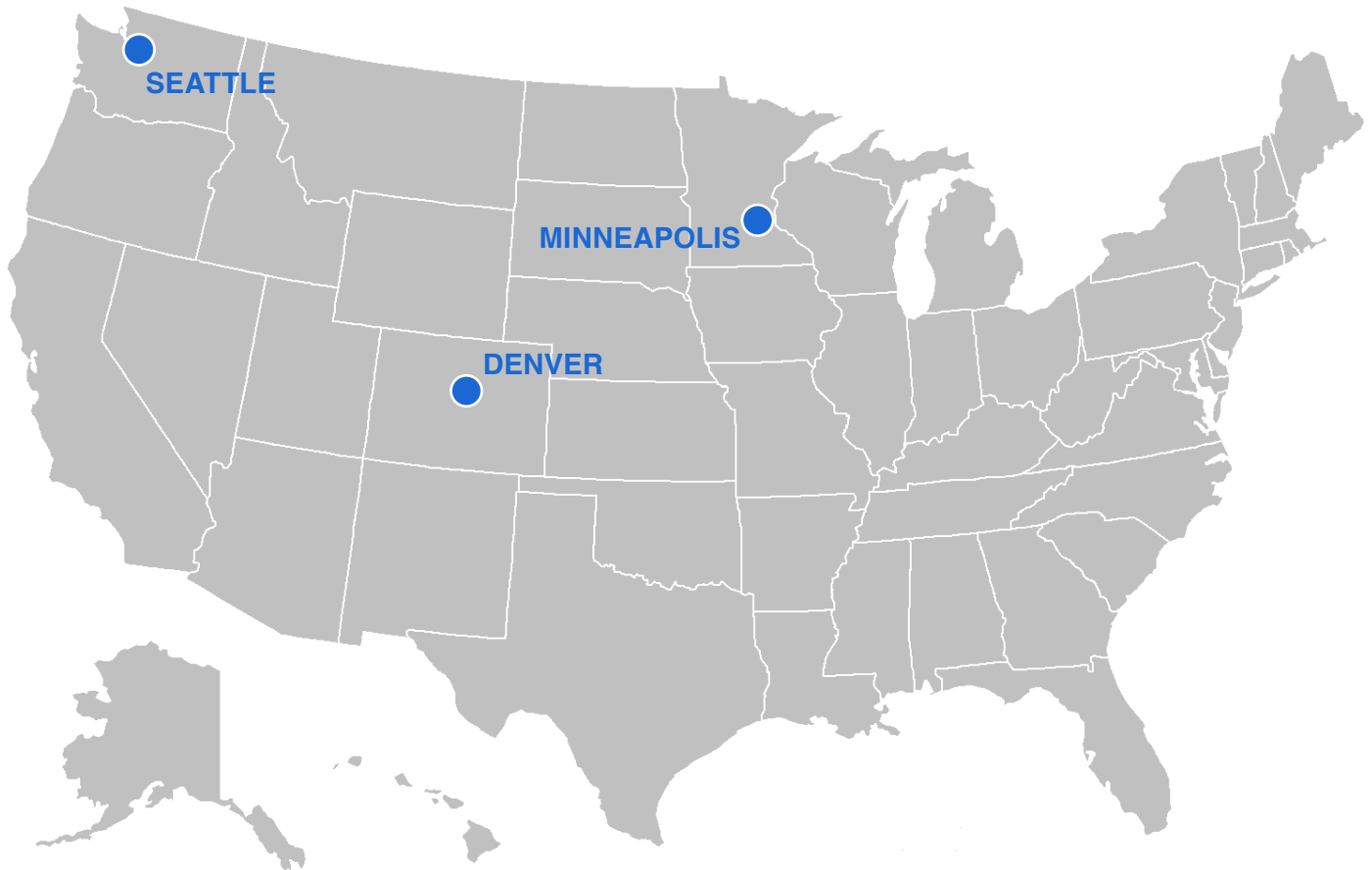
### **Making the Case For the Flexible Co-Living Housing Model**

The Pew Charitable Trusts and Gensler sought to redefine the flexible co-living housing typology and assess its compatibility as an office conversion. The team conducted the initial study in three cities to test feasibility in a variety of local markets, downtown office building inventories, and regulatory landscapes.

Cities were assessed based on the following factors:

- High median rent,
- High rate of homelessness and housing insecurity,
- High downtown office vacancy rate, and
- No significant existing regulatory barriers that would impact the feasibility of the concept.

**Denver, Minneapolis, and Seattle** were selected as the three cities for this initial study. The team will assess additional cities in the months to come.



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# DENVER, COLORADO

An aerial photograph of Denver, Colorado, showing a mix of modern skyscrapers and older buildings. In the foreground, there is a large green park area with a circular driveway and a classical building. The city skyline is visible in the background under a clear blue sky.

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Pew Gensler

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# DENVER, COLORADO

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# Denver: Existing Conditions, Regulatory Overview, and Building Stock

## The State of Housing in Denver

Denver is a rapidly growing city that has experienced rising rents and erosion of affordability citywide. According to Apartment List data, between 2018 and 2024, the overall median rent in the city of Denver increased 18% and is \$1,771 per month as of July 2024.

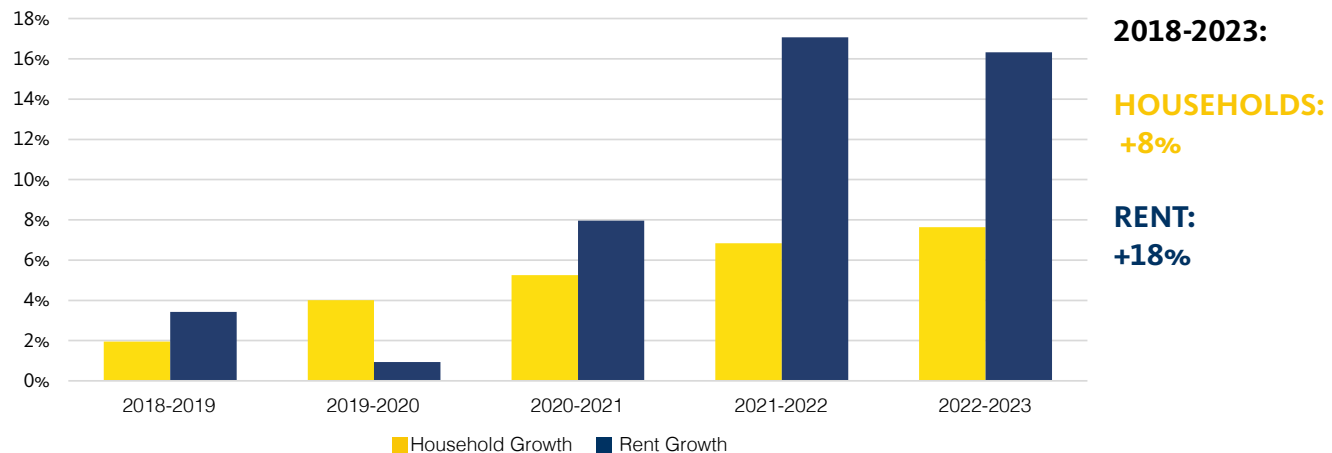
Rising housing costs have contributed to a citywide homelessness estimate of almost 10,000 individuals according to recent estimates conducted by the Metro Denver Homeless Initiative. A rate of 21.2 per 10,000 inhabitants exceeds the national average.<sup>1</sup> Simultaneously, downtown office vacancy rates are approaching an average of 30%.<sup>2</sup>

## The Opportunity

The opportunity to introduce affordable co-living housing in Denver is promising: There are minimal local regulatory barriers that often prohibit flexible co-living residential typologies. Initial conversations suggest that there is notable local political will to encourage new housing typologies, along with other solutions to address housing affordability and rising homelessness and housing insecurity.

Several local programs that support these goals are already underway or in development, and can be leveraged to enhance the viability of this housing model.

## Household and Rent Growth (Cumulative)



<sup>1</sup> HUD Annual Homeless Assessment Report 2023 Point-in-Time Estimates by CoC <https://huduser.gov/portal/datasets/ahar/2023-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html>

<sup>2</sup> Colliers Downtown Commercial Vacancy Rate Q4 2023 <https://www.colliers.com/en/research/denver/2024-q2-denver-office-market-report>

Chart Data Sources: Apartment List National Rent Report (as of July 2024) <https://www.apartmentlist.com/research/national-rent-data>, Esri Business Analyst



# Denver at a glance:



**MEDIAN  
RENT**

**\$1,771**



**HOMELESSNESS  
RATE**

**21.2 per 10k**



**DOWNTOWN  
OFFICE  
VACANCY**

**29%**



**REGULATORY  
BARRIERS**

**LOW**

## Denver Building Code

The City of Denver uses International Code Council (ICC) with Amendments. Currently, 2021 is the base code. Denver has not added amendments to the Building and Fire Code that would restrict the ability to create co-living housing. In situations where existing buildings have stairways too close to each other, the City has an Admin Mod (modification) process, which is used to address existing conditions and hardships.

The building occupancy is Residential Group R-1. R-1 occupancies contain sleeping units where occupants are primarily transient in nature, which includes boarding houses with more than 10 occupants, congregate living facilities with more than 10 occupants, and hotel / motels. The definition of transient varies by the authorities having jurisdiction: Occupancy compliance conversations will be forthcoming during entitlements.

Per Denver Community Planning and Development, the following definition of Congregate “Group Living” also applies. Refer to Section 11.12.2.2 of the Denver Zoning code for more information:

Congregate living encompasses all uses with more people living together than allowed in a single household, but where some type of care is not required. This includes groups of persons who each have separate contracts or agreements with property owners, who do not jointly occupy the entirety of a dwelling unit but who exceed the maximum number of adults permitted in a household as defined in the zoning code. Residents may share sleeping units, and may have shared cooking, bathroom and common areas, or some combination of personal and shared facilities, but do not necessarily occupy a dwelling unit jointly. Tenancy is arranged on a month-to-month or longer basis.

Types of congregate living currently allowed include (but are not limited to):

- Rent-by-the-room configurations, such as rooming and boarding houses or student housing.
- Campus dormitories that house students, including a building used for members of a fraternity or houses officially recognized by a college/university or seminary.
- Permanent tiny home villages.

Where congregate living is allowed:

- Multi-unit residential and mixed use commercial zone districts.
- Congregate living uses are prohibited in single-unit and two-unit residential areas.

Therefore, congregate living is explicitly prohibited in single use and two unit residential areas, but not mixed-use commercial zones.

## Zoning

The buildings studied are within D-C zoning, which is a by-right zone designation with no restrictions around converting from office to residential. Key considerations include:

- 60% of the ground floor linear frontage must be active use (e.g., retail) at the ground floor along named streets, as well as the 16th Street Pedestrian Mall.
- Floor area ratio (FAR) governs development, but existing buildings are grandfathered in. Renovations cannot add gross floor area (GFA) if the building already exceeds its maximum per the zoning designation.

## Affordable Housing Requirements

The City requires residential projects to achieve one of two options in providing affordable housing.

- 10% of total units at 60% AMI or,
- 15% of units at 70% AMI

This study intends to serve a market segment with housing for which the target market-rate rent would likely be below the required income-restricted rent even if no restriction were formally imposed. Because these income and rent restrictions are not binding on the targeted market rent, they should not affect the study's financial viability.

## Green Building Requirements

Projects will need to comply with Denver energy standards, which include electrification of the heating and cooling systems. For adaptive reuse projects, the City is exploring the ability to negotiate relaxed requirements to support conversions.



### Denver Downtown Development Authority Expansion<sup>1</sup>

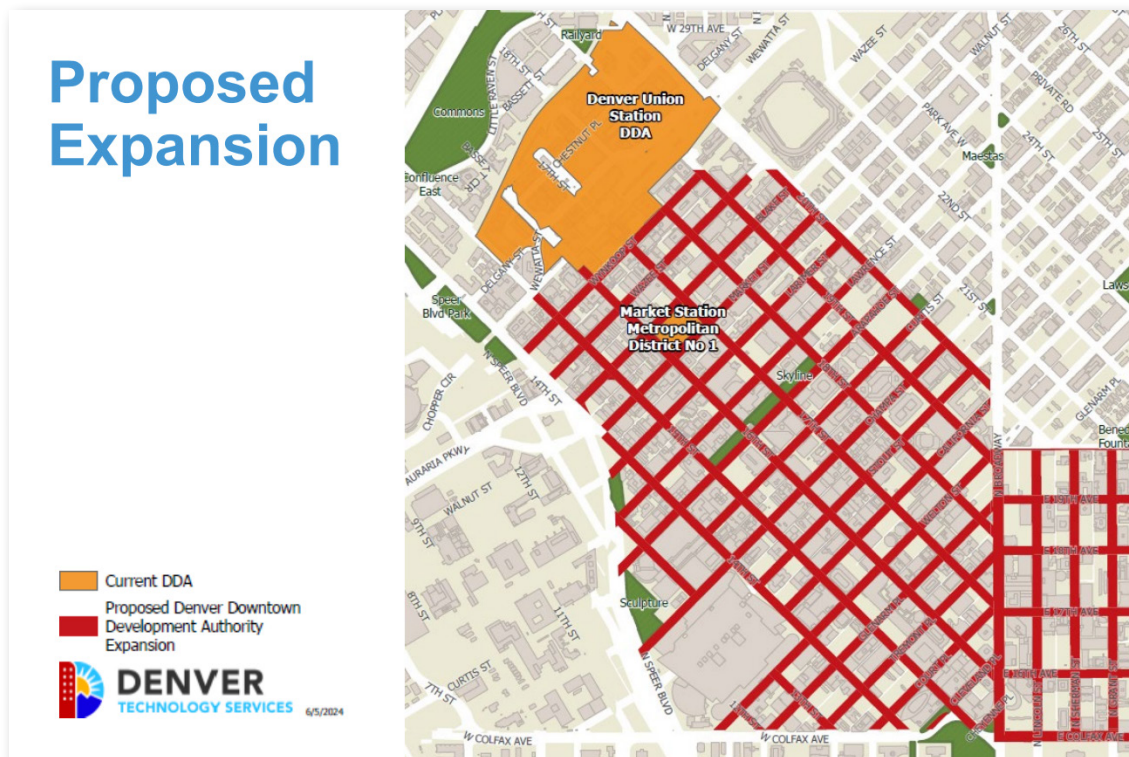
The Downtown Development Authority (DDA) supports catalytic investments that spur economic growth and revitalization in the city’s downtown. It was originally established in 2008 as a special district that leveraged incremental property tax and sales tax revenues to finance the redevelopment of the Union Station Area.

In the fall of 2024, there is a ballot initiative to significantly expand the boundary of the DDA to comprise most of the central business district. It is expected that the expanded district will generate \$500 million in funds to reinvest into the downtown area. Eligible costs include housing and open space improvements, among others.

### Upper Downtown Adaptive Reuse Pilot Program<sup>2</sup>

In the summer of 2023, the City of Denver released its Adaptive Reuse Pilot Program to facilitate conversion activity in its Upper Downtown. The program supports conversions by providing direct assistance to business owners, developers, and property owners through:

- Assigning a dedicated Project Coordinator to guide projects through the City and County of Denver’s multi-agency permitting process
- Expediting applications
- Providing guidance on common roadblocks and challenges, and
- Potentially offering additional local incentives to lessen project time and cost.



Proposed Denver Downtown Development Authority expansion boundary

<sup>1</sup> Amended Denver Downtown Development Authority Plan of Development <https://denvergov.org/files/assets/public/v1/economic-development/documents/dda/amended-dda-plan-of-development-draft-v3-jul10-24.pdf>

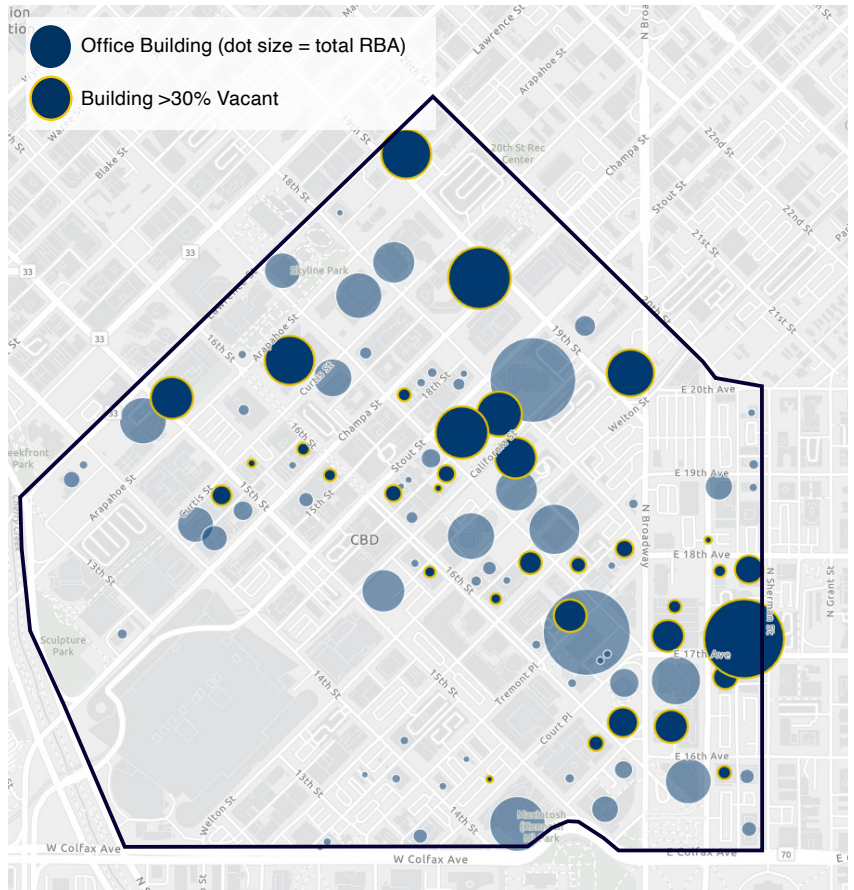
<sup>2</sup> Denver Upper Downtown Adaptive Reuse Pilot Program Fact Sheet <https://denvergov.org/Government/Agencies-Departments-Offices/Agencies-Departments-Offices-Directory/Community-Planning-and-Development/Denver-Zoning-Code/Urban-Design-Design-Review-Design-Standards-and-Guidelines/Adaptive-Reuse?transfer=9225d2c1-51e0-4901-99d4-dd2f5737b6b3#section-2>

### The Denver Central Business District

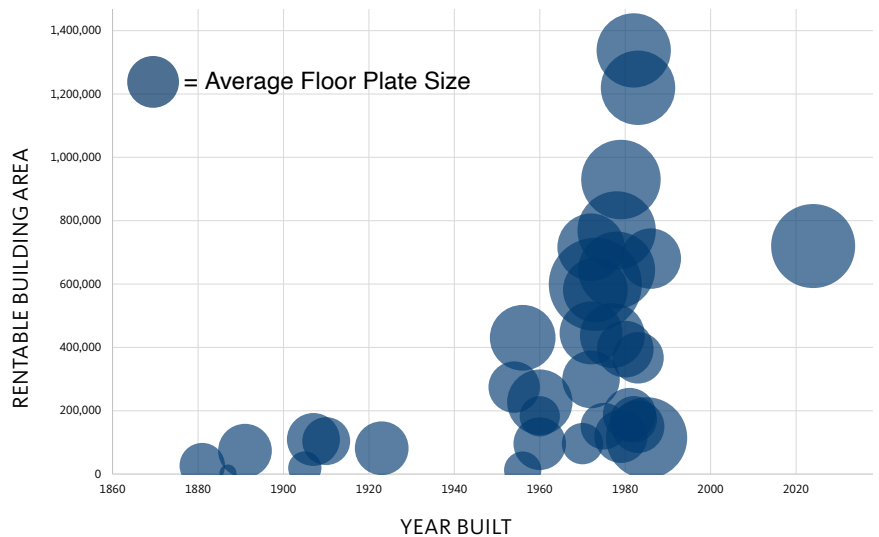
According to data from CoStar, there are approximately 100 office buildings in downtown Denver within the boundary of the Upper Downtown Adaptive Reuse Pilot Program, comprising about 13 million square feet. An estimated 35 office buildings within the boundary are at least 30% vacant. Denver's office stock is relatively homogenous as the majority of buildings were constructed during the Rocky Mountain oil boom and global energy crisis from the late 1970s through early 1980s.<sup>1</sup>

Over the last ten years, there has been one purpose-built office building constructed within the central business district and office inventory has exceeded demand, leaving downtown with high vacancies and an oversupply of dated office stock due to the changing nature of the local economy and added competition from suburban development.

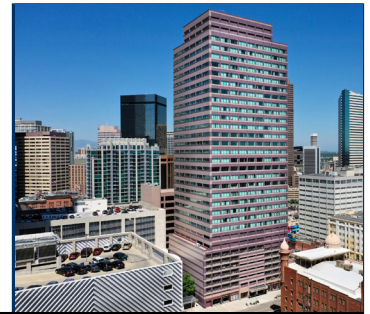
### Denver Upper Downtown District Boundary



### Downtown Office Stock (>30% Vacant)



<sup>1</sup> Denver's Smugness of '70s Gone : Sagging Economy Brings Mile-High City to New Low <https://www.latimes.com/archives/la-xpm-1986-12-01-mn-159-story.html>  
 Chart and Map Data Source: CoStar



>30% VACANT PROPERTIES	TYPE 1	TYPE 2	TYPE 3
% of Building Stock	< 5% of total SF	15-20% of total SF	75-80% of total SF
Age	1900s - 1920s	1950s - Early 1970s	Late 1970s - 1980s
Number of Floors	5 - 8 floors	10 - 20 floors	25 - 50 floors
Average Floor Area Ratio (FAR)	5.0	12.0	12.0
Average Floorplate	9,000 SF	14,500 SF	18,000 SF
Average Vacancy Rate	62%	54%	54%
			<b>DOMINANT TYPOLOGY</b>

### Office Typologies

Denver’s office stock with at least 30% vacancy can be categorized into three primary typologies, as described below, based on attributes such as height, floor plate size, style and year built. These factors, along with other physical attributes such as building depth and window configuration, impact their potential for conversion to traditional, market-rate residential products.

Three typologies of properties experiencing 30%+ vacancy downtown:

**Type 1:** Mid-rise density built between the 1900s-1920s with a smaller footprint and average floorplate of 9,000 SF. These buildings represent less than 5% of the selected inventory.

**Type 2:** Mid-density high rise (10-20 floors) buildings built before 1975. These properties have a slightly larger average floorplate of 14,500 SF and represent 15-20% of the selected office inventory.

**Type 3:** High rise office buildings of 25-50 stories, built between 1975-1985. The average floorplate of these properties is 18,000 SF and they represent 75-80% of the selected office inventory. **Type 3 was selected as the prototype for testing possible conversion feasibility.**

# Flexible Co-Living: Defining the Product

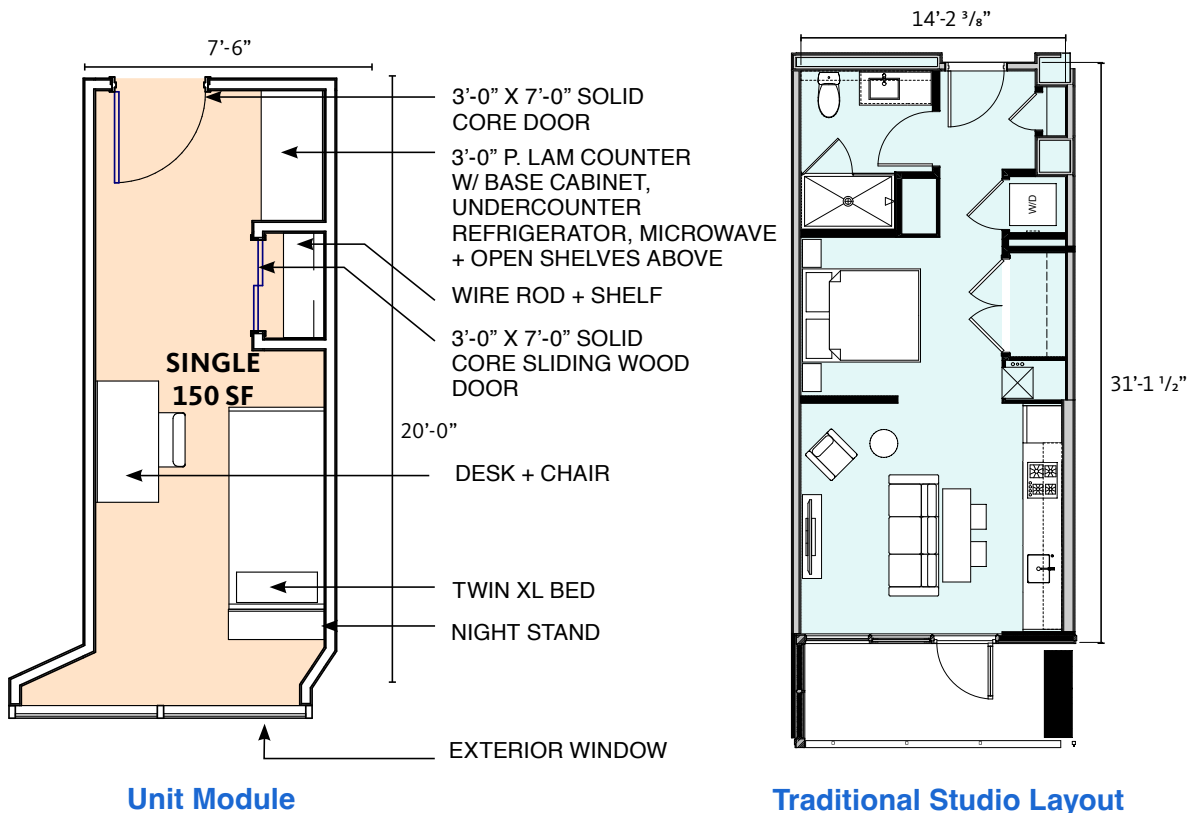
## Program and Unit Module

A program and unit module were developed to align with the project's goals and conform to the City of Denver's building code.

A typical single-occupant sleeping room consists of a private room between 122 SF and 208 SF. In-room furnishings would include a twin XL bed, desk and chair, and nightstand along with a microwave and standard-depth half-sized refrigerator to store personal food and beverage items. A storage shelf and cabinet can be used to store personal belongings. Each sleeping room is secured via a solid core wood door that can be locked by its occupant. Demising walls between sleeping rooms are designed with specifications to ensure the appropriate sound insulation.

To address building layout conditions and to increase the variety of housing typologies, the plan may also accommodate a number of larger units between 259 SF and 285 SF that can each accommodate up to two sets of furniture and storage.

A traditional studio layout of approximately 440 SF is shown as a point of comparison, which includes a full kitchen and bathroom in-unit.



# Test Fits and Yields

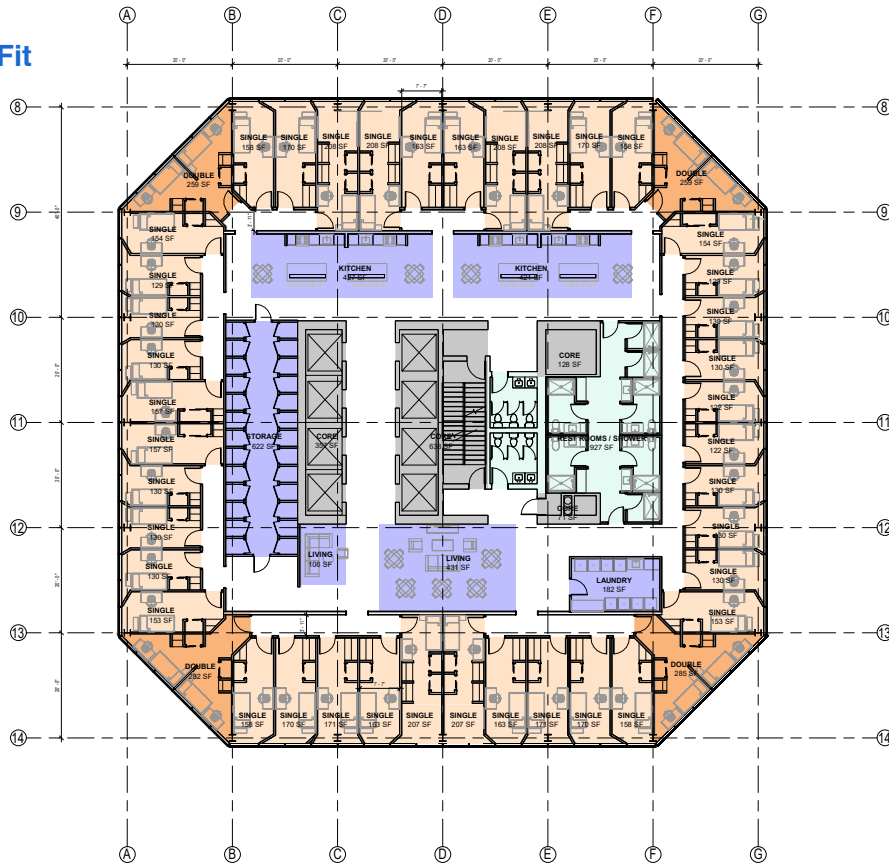
## Shared Facilities and Amenity Spaces

The following shared facilities are provided on each residential floor. The quantities of specific fixtures are driven by required ratios per occupant as defined by building code:

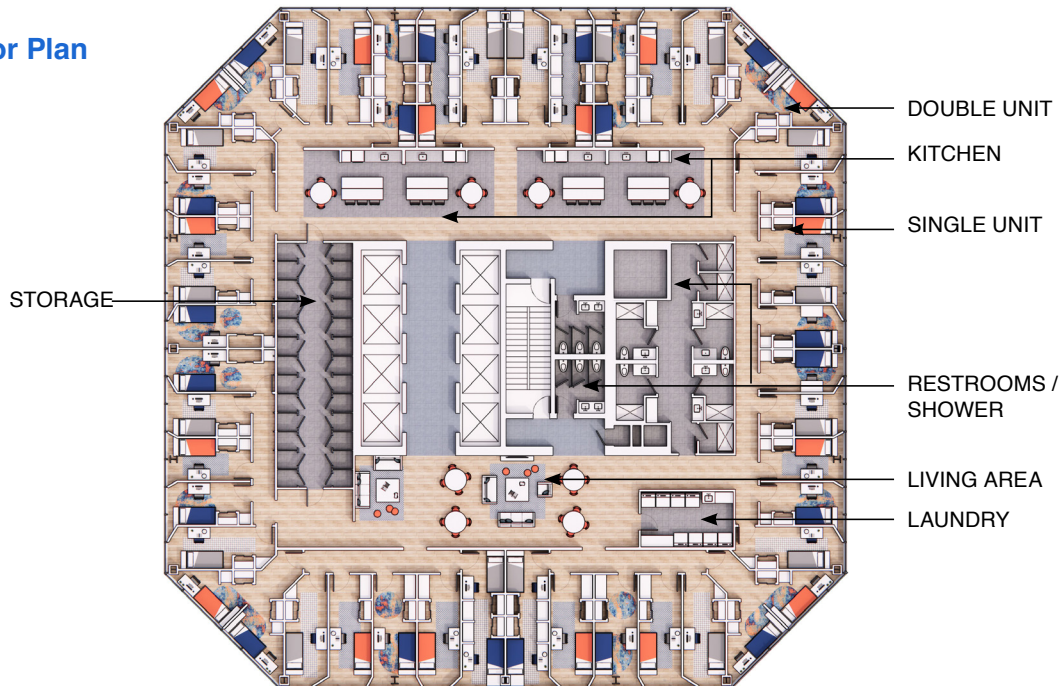
- **Kitchens:** Four shared kitchen areas are included on each floor. Each kitchen area includes standard fixtures and appliances including a sink, electric range/oven, range hood, and microwave. In lieu of a refrigerator in the kitchen area, tenants have access to their individual half-sized refrigerator located in their dwelling unit. There are no code minimums for number of occupants per kitchen facility.
- **Living Room:** There are two shared living areas per floor, accommodating a variety of seating areas including couches and tables.
- **Bathrooms:** Bathroom facilities are shared in the interior of the floor utilizing existing plumbing stacks from the office core. Building codes require one sink per ten occupants, one toilet per ten occupants, and one shower per eight occupants. There are two restrooms with three toilets and two sinks each, in addition to four single-occupant bathrooms and a central shower facility. This facility includes three individual shower stalls and two shared sinks, plus the four single-occupant rooms that each contain one shower, toilet, and sink.
- **Laundry:** One laundry room per floor accommodates four washers and four dryers plus one sink. There are no code minimums for number of occupants per laundry facility.
- **Storage:** A central storage area includes individual double-stacked storage spaces that can be locked.



Typical Floor Test Fit



Rendered Floor Plan



### Yields per Floor

The prototypical building studied has a gross floor area of 13,941 SF. Each floor can accommodate 48 beds across 40 single units and 4 double units, for a total residential area of 10,487 SF per floor. While 34 of the single units range between 122 SF and 171 SF, six of the single units have larger areas between 207 SF and 208 SF due to the orientation of interior hallways. The larger units may be rented at a slight premium to the smaller, more prevalent single units because they offer larger living areas.

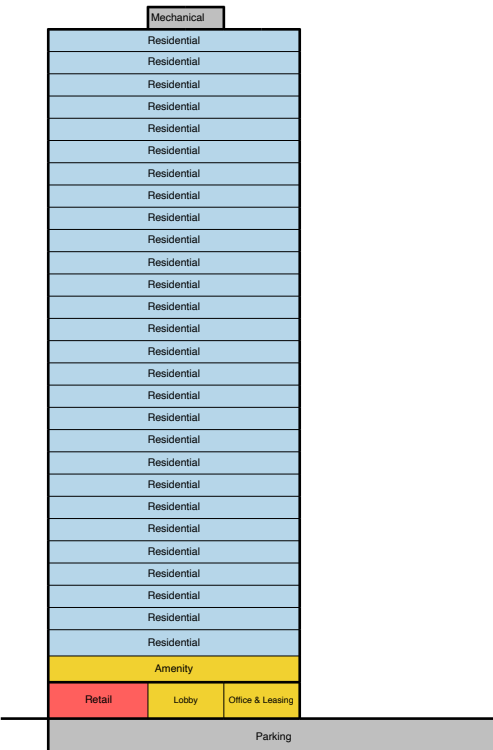
This yield produces a residential efficiency ratio of 70.7%. The remaining 29.3% of the gross floor area is comprised of the shared facilities and the building’s core and interior circulation.

The ratios of shared facilities/fixtures per occupant conform with Denver’s building code regulations.

### Building Summary

The prototypical building studied is 30 floors, excluding the top mechanical floor. The ground floor would consist of a main lobby, a management office, and approximately 6,000 SF of retail space. The second floor contains approximately 10,000 SF of Class B office space plus building-level shared amenities including a fitness center. Parking for 111 cars and 250 bikes is included in the basement level. Floors 3-30 are dedicated for residential use, and each floor would have an identical layout.

Assuming 28 residential floors and 48 beds per floor, the building can yield a total occupancy of 1,344 occupants, or 1,232 units.



STATISTICS	
Residential Area	7,367 GSF per floor
Interior Amenity	2,494 GSF per floor
Gross Floor Area	13,941 GSF per floor
Efficiency	70.7%
Occupants	48 (4 double units, 40 single units)
	294.4 GSF per occupant
Toilets	10 (4.8 occupants per fixture)
Showers	7 (6.8 occupants per fixture)
Sinks	10 (4.8 occupants per fixture)
Kitchens	4 (12.0 occupants per fixture)
Washer/Dryers	4 (12.0 occupants per fixture)

## Building Summary

	Levels	Floor to Floor	OA Height	Units	Parking Spaces	Bikes	Bike Room	Storage	B.O.H Services/ Mech	Common Area	Leasing/ Lobby	Interior Amenity	Retail / Office	Net Rentable Unit Area per Floor	Gross SF per Floor	EFF / Flr	Avg Unit Size
			334.00						SF	SF	SF	SF		SF	SF		SF
Mechanical	31	11.00	323.00						1,500								
Residential	30	11.00	312.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	29	11.00	301.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	28	11.00	290.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	27	11.00	279.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	26	11.00	268.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	25	11.00	257.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	24	11.00	246.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	23	11.00	235.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	22	11.00	224.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	21	11.00	213.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	20	11.00	202.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	19	11.00	191.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	18	11.00	180.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	17	11.00	169.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	16	11.00	158.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	15	11.00	147.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	14	11.00	136.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	13	11.00	125.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	12	11.00	114.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	11	11.00	103.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	10	11.00	92.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	9	11.00	81.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	8	11.00	70.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	7	11.00	59.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	6	11.00	48.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	5	11.00	37.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	4	11.00	26.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Residential	3	11.00	26.00	44				622	1,194	2,264		2,494		7,367	13,941	70.7%	167
Amenity Floor	2	11.00	15.00	0					1,194	2,264		1,749	10,000		13,941		
Ground Floor	1	15.00	0.00	0	0				1,000	1,000	5,941		6,000		13,941		
Basement Parking	B	11.00			111	250	2,500										
	Floors			Units	Parking Spaces	Bikes	Bike Room	Storage	B.O.H Services/ Mech	Common Area	Leasing/ Lobby	Interior Amenity	Commercial	Net Rentable Unit Area	GSF		Avg Unit Size
Totals	31		334	1,232	111	250	2,500	17,416	37,126	66,656	5,941	71,581	16,000	206,276	418,230		167

# Meeting the Market: Rents and Users

## Quantifying the Market for Flexible Co-Living

Initial market research suggests that there is a sizable potential market for the flexible co-living concept. According to data from the American Community Survey, within the City of Denver, half of the city's 350,000 households are renters. Of these 180,000 households, 50% are single-occupant, and only 12% are comprised of four people or more.

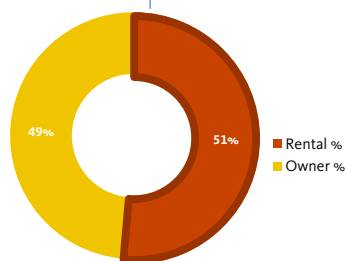
The household incomes of Denver's single-occupant renters are relatively evenly distributed. Approximately 20% or 18,000 single-occupant households earn between \$20,000 and \$40,000 per year.

25% of Denver-area renters are considered severely cost-burdened, meaning they pay more than 50% of their income for rent. 51% of all Denver-area renters spend more than 30% of income on rent.<sup>1</sup>

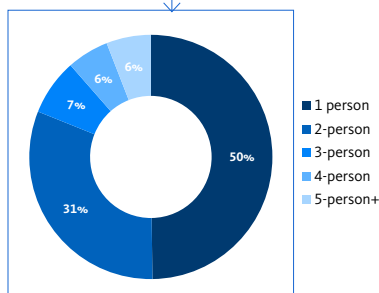
The quantity of single-person renter households earning less than \$40,000 per year, or approximately 40-50% of the Area Median Income (AMI), suggests a sizable market for the flexible co-living typology. The single-occupant model offers a more affordable but market-rate product that aligns with renters' incomes and housing budgets.

**There are 180,000 renter households in the city of Denver and 50% (90,000) of them are Single-Occupant**

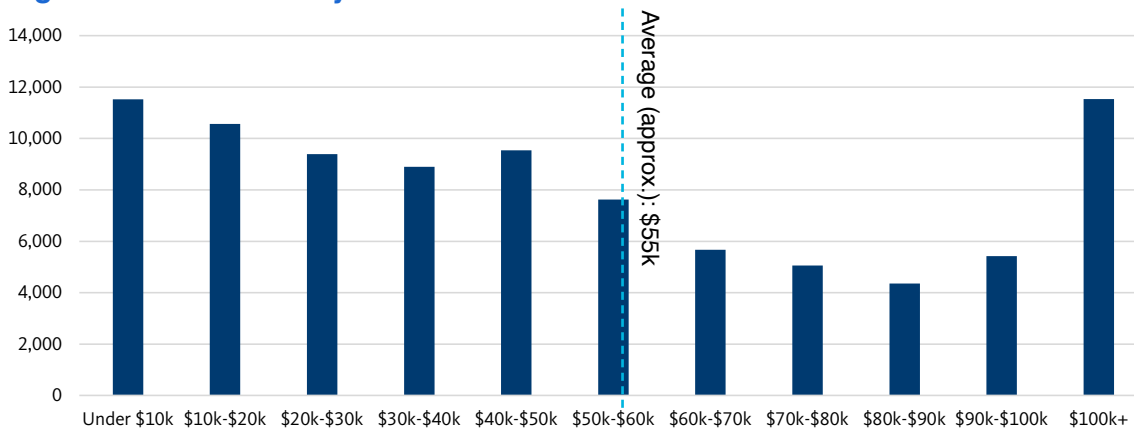
Household Tenure



Renters by Household Size



Single-Person Renters by Household Income



<sup>1</sup> The State of the Nation's Housing, Harvard Joint Center on Housing Studies [https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard\\_JCHS\\_State\\_Nations\\_Housing\\_2022.pdf](https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_State_Nations_Housing_2022.pdf)  
 Data Source: American Community Survey Public Use Microdata Sample (PUMS) 2022 1-Year Estimate  
 Selected geographies: Downtown Denver PUMA; Northeast Denver PUMA; Southwest Denver PUMA; South Denver PUMA; Glendale PUMA.

### Potential Rents

Based on the distribution of single-person renter households in Denver, there are approximately 18,000 individuals who earn between \$20,000 and \$40,000 per year.

HUD standards define a monthly housing budget as 30% of monthly income. Within this income bracket, households have a supportable housing budget of \$500 to \$1,000 per month. A \$500 to \$1,000 monthly housing budget would correspond to approximately 30-50% of local Area Median Income (AMI) levels for single-person households.

The median monthly rent for a market-rate unit in the city of Denver is currently \$1,771. As such, the housing budgets of this segment are far lower than the rents of most existing and available product within the city.

Developing the flexible co-living product at rents between \$500 and \$1,000 per bed per month would meet the target resident’s housing budget in the market and provide an affordable option as compared to other available housing, delivering new supply at a significant discount to other market-rate offerings.

HH Income	Count	HH Income		Monthly Housing Budget (30%)		AMI (Average)
		Low	High	Low	High	
Under \$10k	11,520	\$0	\$9,999	\$0	\$250	<20% AMI
\$10k-\$20k	10,560	\$10,000	\$19,999	\$250	\$500	<20% AMI
<b>\$20k-\$30k</b>	<b>9,390</b>	<b>\$20,000</b>	<b>\$29,999</b>	<b>\$500</b>	<b>\$750</b>	<b>~30% AMI</b>
<b>\$30k-\$40k</b>	<b>8,900</b>	<b>\$30,000</b>	<b>\$39,999</b>	<b>\$750</b>	<b>\$1,000</b>	<b>~40% AMI</b>
\$40k-\$50k	9,540	\$40,000	\$49,999	\$1,000	\$1,250	~50% AMI
\$50k-\$60k	7,620	\$50,000	\$59,999	\$1,250	\$1,500	~60% AMI
\$60k-\$70k	5,660	\$60,000	\$69,999	\$1,500	\$1,750	~70% AMI
\$70k-\$80k	5,060	\$70,000	\$79,999	\$1,750	\$2,000	~80% AMI
\$80k-\$90k	4,360	\$80,000	\$89,999	\$2,000	\$2,250	~80-90% AMI
\$90k-\$100k	5,430	\$90,000	\$99,999	\$2,250	\$2,500	100%+ AMI
\$100k+	11,530	\$100,000	\$1,000,000	\$2,500	\$25,000	100%+ AMI

\$500-\$1,000  
Target Per Bed Rent  
Range

Source: American Community Survey Public Use Microdata Sample (PUMS) 2022 1-Year Estimate  
Selected geographies: Downtown Denver PUMA; Northeast Denver PUMA; Southwest Denver PUMA; South Denver PUMA; Glendale PUMA.

# Operating Model and Financial Feasibility

Baseline project assumptions include industry standard and local market benchmarks to evaluate the feasibility of the project without additional subsidy. The following pages identify various levers that a developer could utilize in order to arrive at marketable returns for levered and unlevered internal rates of return (IRR).

For this project, rents for standard singles are assumed at \$850 per month, which would be affordable for a single-person household earning 38% of AMI. Premium singles are rented at a slight

premium of \$900 per month. Double units are rented at \$600 per bed per month, which would be affordable for a single-person household earning 27% of AMI.

The HUD voucher available to pay for units like these allows rents in Denver up to \$1,229 in the current fiscal year, well above projected rents for this building. For comparison, a typical studio apartment in downtown Denver rents for approximately \$1,420 per month as of August 2024.

## PROJECT OPERATING ASSUMPTIONS

Rent/Bed	Per Month per Person	Annualized
Standard Single Bed	\$850	\$10,200
Double Bed	\$600	\$7,200
Premium Single Bed	\$900	\$10,800
<b>Avg Weighted Rent</b>	<b>\$815</b>	<b>\$9,775</b>
<b>Vacancy/Rent Loss</b>		<b>10%</b>
<b>Total Operating Expenses (OpEx) / SF</b>		<b>\$13.50</b>
Management Fee (%EGI)		2.5%
OpEx Ratio (as a % of total revenue)		38%
<b>Capital Reserves/Unit</b>		<b>\$400</b>
<b>Rent Escalation</b>		<b>3%</b>
<b>OpEx Escalation</b>		<b>3%</b>

## PROJECT PROGRAM

Units Per Floor	44	Beds/ Floor	48
Doubles	4	9%	Doubles 8 17%
Singles	34	77%	Singles 34 71%
Premium Single	6	14%	Premium Single 6 13%
<b>Total Units</b>	<b>1,232</b>	<b>Total Beds</b>	<b>1,344</b>

## OTHER INCOME

Parking Spaces	111 spaces	\$50/month
Bike Spaces	250 spaces	\$10/month
Office SF	10,000 SF	\$18/SF
Retail SF	6,000 SF	\$16/SF

**OPERATING ASSUMPTIONS**

**Rent & Vacancy**

Monthly rents of \$850 per month per person for standard singles, \$900 for larger ‘premium’ singles, and \$600 per month per person for doubles align with the target market’s housing budget and AMI levels of 30-50%. 3% annual rent and operating expense escalation rates align with market benchmarks for this type of product.

Other revenues include \$50/month for car parking, \$10/month for bike parking, a net office rent of \$18/SF and retail rent of \$16/SF to align with market benchmarks.

A 10% average vacancy rate exceeds the average market-rate vacancy rate in Denver, reflecting a risk premium and is in line with typical vacancy rates for similar concepts elsewhere.

**Operating Expenses**

A total annual operating expense cost of \$13.50/SF is based on industry benchmarks for multi-family buildings and includes utilities, repairs, maintenance, management, and insurance. This includes a higher insurance cost to account for higher anticipated insurance premiums associated with the product. Operating expenses as a percentage of total revenue average 38%, higher than typical multi-family benchmarks but reflective of higher operating costs associated with the product.

No real estate taxes have been included at this time.

**Capital Reserves**

Annual capital reserves of \$400 per bed are included to account for capital improvements and necessary unit refresh upon resident move-outs.

**DEVELOPMENT COST ASSUMPTIONS**

**Construction Costs**

Turner Construction Company was engaged to develop construction cost estimates for the prototypical building and test fit studied. The key variables in estimating construction costs are the quality of the building’s existing mechanical, electrical, and plumbing (MEP) systems and the degree of anticipated interior demolition. These are heavily dependent on individual building conditions.

Turner developed a high and low cost range for two existing building conditions. The high range Option 1 assumes selective demolition of all floors and full replacement of HVAC and electrical systems. Option 2 assumes the reuse of existing HVAC and electrical systems plus the reuse of 50% of the existing shell space. In practice, developers are more likely to seek out and prioritize buildings for conversion that have the most intact systems to minimize MEP costs. Thus, **\$246/GSF in hard costs**, within the Option 2 range, is used for modeling purposes. Additional due diligence on a per-building basis would be required to refine cost estimates further.

<b>CONSTRUCTION COST ESTIMATES</b>	<b>OPTION 1</b>	<b>OPTION 2</b>
<i>Selective Demolition</i>	<i>Demo at all floors</i>	<i>50% of existing shell maintained</i>
<i>Hazardous Materials Abatement</i>	<i>Includes abatement allowance</i>	<i>Abatement not required</i>
<i>Fire Protection</i>	<i>Existing systems reused</i>	<i>Existing systems reused</i>
<i>Plumbing</i>	<i>Existing service/stacks reused</i>	<i>Existing service/stacks reused</i>
<i>HVAC</i>	<i>New systems required</i>	<i>Existing systems reused</i>
<i>Electrical</i>	<i>New systems required</i>	<i>Existing systems reused</i>
<b>Construction Cost Estimate</b>	<b>\$291/GSF</b>	<b>\$246/GSF</b>
<i>Low-High Estimate</i>	<i>\$271 - \$320/GSF</i>	<i>\$234 - \$277/GSF</i>

An industry-standard soft cost estimate of 15% of hard costs is included to account for architectural, engineering, permitting, and legal fees. A 5% contingency on hard & soft costs was also added per standard practice. \$5,000 per bed in furnishings, finishes, and equipment (FF&E) is also included.

### Acquisition Costs

Due to the unknown dynamics of a potential development scenario, additional due diligence will be required on a per-building basis to identify a reasonable acquisition cost. Variables that would likely impact property value at the time of purchase include operating income, market cap rates, building condition, and available sales comps.

In addition to property value, there are multiple likely development scenarios for this product typology. These include, but are not limited to: the existing property owner self-develops the conversion; the existing property owner contributes the land as collateral in a joint-venture development; a foreclosed or bank-owned property is purchased by a developer at a discounted purchase price; a potential land swap between property owners; or a standard purchase at market value.

The development pro forma includes a purchase price/acquisition cost of **\$50/GSF or \$21 million.**

### Financing Assumptions

The project assumes traditional debt and equity and no public financing or other forms of assistance. Industry benchmark loan assumptions of 65% loan-to-value (LTV) and a 30-year amortization are used for permanent financing. The remaining 35% of project costs are expected to be sourced through equity.

Interest rates are assumed at 6.0% for permanent financing and 10% for the construction period.

An exit cap rate of 5.75% is assumed during reversion in year 10 with a 3.0% sale commission.



DEVELOPMENT COSTS	TOTAL	PER GSF	PER BED	PER UNIT
Land/Building Purchase	\$20.91M	\$50		
Construction (Hard) Costs	\$102.88M	\$246	\$76,500	\$83,500
Soft Costs (15%)	\$15.43M	\$37		
Contingency (5%)	\$5.92M	\$14		
FF&E <sup>1</sup>	\$6.72M	\$16	\$5,000	
<b>Total Project Costs</b>	<b>\$151.85M</b>	<b>\$363</b>	<b>\$113,000</b>	<b>\$123,300</b>

### PROJECT FINANCING ASSUMPTIONS

Debt Loan-to-Value (LTV)	65%
Equity	35%
Permanent Loan	6.0%
Construction Period Loan	10.0%
Permanent Loan Period	30-Years
Exit Cap Rate	5.75%
Terminal Sale Commissions	3.0%

5-YEAR CASH FLOW (\$ millions)	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Rental Income <sup>2</sup>		13.53	13.94	14.36	14.79	15.23
Vacancy Loss <sup>3</sup>		-5.41	-1.39	-1.44	-1.48	-1.52
Other Income <sup>4</sup>		0.38	0.41	0.44	0.50	0.58
Effective Gross Revenue		8.50	12.95	13.37	13.81	14.29
Operating Expense <sup>5</sup>		-4.69	-4.94	-5.09	-5.25	-5.41
Capital Reserves		0.00	-0.52	-0.54	-0.55	-0.57
<b>NOI</b>		<b>3.81</b>	<b>7.49</b>	<b>7.74</b>	<b>8.01</b>	<b>8.31</b>
<b>Total Before Tax Cash Flow</b>	<b>-164.99</b>	<b>3.81</b>	<b>7.49</b>	<b>7.74</b>	<b>8.01</b>	<b>8.31</b>
Terminal Value (Yr 10), Net Cost of Sale	197.93					
<b>Unlevered IRR</b>	<b>6.4%</b>					
<b>Levered IRR</b>	<b>9.1%</b>					
<b>Equity multiple - Exit year</b>	<b>1.62</b>					

<sup>1</sup> Furnishings, Finishes, and Equipment

<sup>2</sup> Average weighted rent of \$9,775 per bed times 1,344 beds; at a 3% annual escalation

<sup>3</sup> Assumes a 2-year stabilization/lease-up period and a stabilized occupancy of 90%

<sup>4</sup> Total annual retail rent, office rent, parking and bike parking monthly fees. 3% annual escalation.

<sup>5</sup> OpEx is calculated on GSF and includes common area maintenance, operations, insurance, and management fees. 3% annual escalation.

## Returns

The project's feasibility was evaluated by developing an operating pro forma and financial model, employing industry-standard methodologies and metrics.

Two key metrics for assessing project performance are the unlevered and levered Internal Rate of Return (IRR). IRR measures both the project's performance and profitability, indicating the expected return on initial capital investment. Property developers and investors use preferred benchmark thresholds for both unlevered and levered IRRs when evaluating a project's financial feasibility.

Unlevered IRR assesses general project feasibility and does not calculate the impact of project financing. Lending institutions typically review a project's unlevered IRR as part of the underwriting process.

Levered IRR measures an investor's return on their project contribution. Generally, projects with attractive levered IRRs can draw investors by generating sufficient Net Operating Income (NOI) to repay investments. Individual risk tolerances determine an investor's preferred levered IRR thresholds.

## Scenarios

The baseline scenario assumes conservative conditions, including market-rate, undiscounted acquisition costs, traditional market-rate financing, and no local public assistance. In reality, interested developers are likely to pursue a number of strategies to reduce development costs by leveraging programs and other subsidies available to them, often with public subsidy or other support.

The city of Denver has a proactive city government backing significant local funding opportunities through the Adaptive Reuse Pilot Program and the anticipated Downtown Development Authority boundary expansion. As a result, the success of alternative financing and project grants is perhaps more likely here than in other cities.

Public subsidies are typically available as grants or loans. Grants directly offset total development costs, reducing the project's overall cost. Grants effectively lower the required equity and debt, positively impacting both the levered and unlevered IRR.

Public subsidies can also be repayable loans with more favorable debt terms compared to traditional lending, such as a lower interest rate or a higher loan-to-value ratio (i.e. less investor equity is required). These terms can reduce the annual cost of debt service on the loan, primarily impacting levered IRR by leaving more residual cash flow for investor returns.

To test the impact of these conditions on the baseline scenario, three alternative scenarios were developed based on the relative availability and ease of applying for and securing the various potential forms of assistance. Scenario 1 assumes a relatively low effort, while Scenario 3 requires a high degree of coordination with multiple public entities, though still within the range of possibility.

**Scenario 1: No Acquisition Costs**

Alternative Scenario 1 assumes no acquisitions costs. This can be achieved in cases where a building is vacant or underperforming to the point where it no longer provides any value in its current state and is acquired at essentially no net cost to the buyer. Alternatively, municipalities sometimes purchase underperforming properties and donate them to developer entities as a form of public assistance for redevelopment purposes.

**Scenario 2: No Acquisition Costs, Local Grant**

In addition to no acquisition costs, Scenario 2 assumes local assistance in the form of a grant equal to 5% of project construction costs.

**Scenario 3: No Acquisition Costs, Local Grant, Below-Market Financing**

Alternative Scenario 3 assumes no acquisition costs, the local grant, plus below-market financing in the form of a low-interest loan that could be offered to the project through one of several national or local programs. The below-market loan is assumed to offer a 40-year amortization, preferred interest rate of 4.75%, and 75% LTV. This is in comparison to the market-rate 30-year amortization, 6.0% interest rate, and 65% LTV used in the prior scenarios. This form of assistance produces lower annual debt service costs and a higher net operating income.

POTENTIAL SOURCES	TYPE OF FUNDING	SOURCE		UNLEVERED RETURNS	LEVERED RETURNS
No Acquisition Costs	Grant	Local	City agency could purchase a vacant property and sell to developer at no cost;	X	X
Local Grant	Grant	Local	City fund or local funding mechanism such as TIF (Tax Increment Financing)	X	X
Below-Market Financing	Loan	Local, State, or Federal	Low-interest rate loan offered through existing local, state, or federal program (e.g. HUD)		X

<b>SCENARIO 0: \$50/SF Acquisition</b>		<b>SCENARIO 1: No Acquisition Costs</b>		<b>SCENARIO 2: No Acquisition Costs Subsidy Grant</b>		<b>SCENARIO 3: No Acquisition Costs Subsidy Grant 4.75% Debt/75% LTV</b>	
<b>RETURNS</b>		<b>RETURNS</b>		<b>RETURNS</b>		<b>RETURNS</b>	
Acquisition Cost	\$20.9M	Acquisition Cost	\$0	Acquisition Cost	\$0	Acquisition Cost	\$0
Subsidy/Equity	\$0	Subsidy/Equity	\$0	Subsidy/Equity	\$7.5M	Subsidy/Equity	\$7.5M
Total Project Costs Net of Subsidy	\$151.9M	Total Project Costs Net of Subsidy	\$130.9M	Total Project Costs Net of Subsidy	\$123.4M	Total Project Costs Net of Subsidy	\$123.4M
Debt	6.0%/ 30-yr amort	Debt	6.0%/ 30-yr amort	Debt	6.0%/ 30-yr amort	Debt	4.75%/40-yr amort
Unlevered IRR	6.4%	Unlevered IRR	8.2%	Unlevered IRR	8.9%	Unlevered IRR	8.9%
Stabilized NOI	\$7.49M	Stabilized NOI	\$7.49M	Stabilized NOI	\$7.49M	Stabilized NOI	\$7.49M
Levered IRR	9.1%	Levered IRR	13.0%	Levered IRR	14.6%	Levered IRR	18.7%
Equity Multiple	2.24	Equity Multiple	2.87	Equity Multiple	3.15	Equity Multiple	3.92
Stabilized DCR	1.04	Stabilized DCR	1.21	Stabilized DCR	1.28	Stabilized DCR	1.44

### Findings and Implications

Under the different scenarios tested, the project produces an unlevered IRR between 6.4% and 8.9% and a levered IRR between 9.1% and 18.7%. These thresholds approach levels that may indicate feasibility but are highly dependent on individual investor and lender tolerances, portfolios, and preferences. The project may require an additional level of subsidy to attract necessary capital.

Regardless of the return metrics, the flexible co-living concept and model succeeds in its ability to deliver much-needed housing at a lower cost. It is estimated that this concept can deliver a dwelling unit with a baseline construction cost of approximately \$123,300 per unit, while the current cost of constructing a traditional studio unit in the city of Denver may far surpass \$400,000 per unit.<sup>1</sup> If subsidy dollars could be dedicated to this concept, the units produced per dollar of public assistance can greatly exceed what is generated under existing housing delivery models since the cost per bed is less than one-third the cost of building a traditional studio.

Furthermore, the concept provides more opportunities for conversion feasibility from a design perspective. The building’s large floor plate size and significant building depth limit design feasibility for a traditional market-rate office-to-residential conversion, but work well for the co-living model. Supporting the concept could expand the share of convertible office buildings, putting additional properties into productive use that would otherwise remain vacant or underutilized.

As housing affordability continues to erode and downtown office vacancy rates remain elevated, this concept can unlock additional office-to-residential conversion opportunities. Policymakers can consider supporting the implementation of office-to-flexible co-living conversions due to the outsized impact that the concept has on housing production in an area of critical need. If successful, cities will be able to deliver low-cost housing in a much more efficient and cost-effective manner, providing thousands of secure, modern, and attractive homes to our nation’s downtowns.

<sup>1</sup> Gensler benchmark study of studio construction costs, September 2024

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# MINNEAPOLIS, MINNESOTA



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Pew Gensler

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# MINNEAPOLIS, MINNESOTA

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# Minneapolis: Existing Conditions, Regulatory Overview, and Building Stock

## The State of Housing in Minneapolis

The city of Minneapolis has made significant headway in maintaining housing affordability in light of continued growth. According to Apartment List data, between 2018 and 2023, the overall median rent in the city of Minneapolis has declined, even as the city added almost 8,000 new households, or an overall increase of 4%.

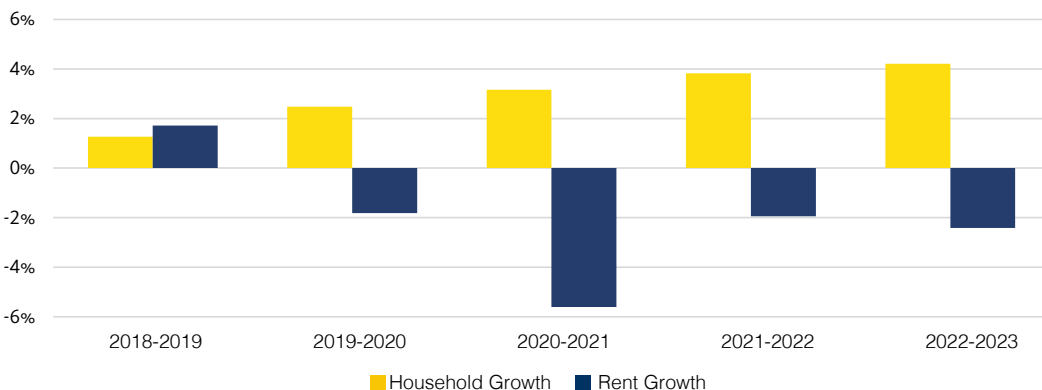
There are an estimated 3,300 individuals in Hennepin County experiencing homelessness according to recent estimates, for a rate of 21.1 per 10,000.<sup>1</sup> Simultaneously, downtown office vacancy rates average 23%.<sup>2</sup>

## The Opportunity

The opportunity to introduce affordable co-living housing in Minneapolis is promising: There are no significant local regulatory barriers that often prohibit flexible co-living residential typologies. Initial conversations suggest that there is notable local political will to encourage new housing typologies, along with other solutions to address housing affordability and rising homelessness and housing insecurity.

Several local programs that support these goals are already underway or in development, and can be leveraged to enhance the viability of this housing model.

## Household and Rent Growth (Cumulative)



**2018-2023:**

**HOUSEHOLDS:**  
+4%

**RENT:**  
-3%

<sup>1</sup> HUD Annual Homeless Assessment Report 2023 Point-in-Time Estimates by CoC <https://huduser.gov/portal/datasets/ahar/2023-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html>  
<sup>2</sup> Colliers Downtown Commercial Vacancy Rate Q4 2023 <https://www.colliers.com/en/research/minneapolis-st-paul/minneapolis-st-paul-office-market-report-q3-2024>  
 Chart Data Sources: Apartment List National Rent Report (as of July 2024) <https://www.apartmentlist.com/research/national-rent-data>, Esri Business Analyst

# Minneapolis at a glance:



**MEDIAN  
RENT**

**\$1,399**



**HOMELESSNESS  
RATE**

**21.1 per 10k**



**DOWNTOWN  
OFFICE  
VACANCY**

**23%**



**REGULATORY  
BARRIERS**

**LOW**



## Minneapolis Land Use

The buildings studied are within the DT-1 (Downtown center) primary zone, in Overlay Zone DP (Downtown parking) with built form overlay BFC50 (Core 50).

Single Room Occupancy is a permitted use within this zoning district. The area of study is also located within the eligible area for the overlay zoning district DH (Downtown Housing). The DH Downtown Housing Overlay District is established to provide areas that offer affordable housing which may not meet the regulations of the primary zoning district, including minimum spacing requirements for congregate living residential uses. Single Room Occupancy is a permitted use within this zoning district.

Crucially, SROs are allowed by non-profits, government agencies, or healthcare agencies in the zoning district. Thus a market-rate developer may need to partner with a non-profit operator or otherwise coordinate further with the authorities having jurisdiction to determine how to build such housing permissibly.

### 244.40 Definitions

*Single room occupancy housing unit: Any housing unit, operated by a non-profit organization, government agency, or healthcare agency, intended or designed to be used for sleeping purposes by residents which serves as their primary residence. Occupancy by no more than two (2) people of a single room, or of two (2) or more rooms which are joined together, separated from all other rooms within an apartment in a structure, so that the occupant or occupants thereof reside separately and independently of the other occupant or occupants of the same apartment. The unit may have a bathroom in addition to the occupied room. Single room occupancy housing units may, notwithstanding any contrary provision in this Code, share a kitchen with one (1) or more other single room occupancy unit(s) in the same building and may also share a bathroom.*

## Minneapolis Building Code

The building use is most appropriately classified as Residential Group R-2, which includes congregate living facilities of a non-transient nature with more than 16 occupants.

Per the International Plumbing Code, “boarding houses,” which most aligns with this typology, require one shower per 8 occupants, one water closet per 10 occupants, and one lavatory per 10 occupants.

MBC 2020 dictates a square footage requirement in dwelling units, see below code excerpt:

From 244.810 – Required Space in Dwelling units.

*Every dwelling unit shall contain a minimum superficial floor area of not less than one hundred fifty (150) square feet for the first occupant, seventy (70) additional square feet for the second occupant and one hundred (100) square feet for each additional occupant in excess of two (2). The floor area shall be calculated on the basis of the total habitable floor area of all habitable rooms. Single room dwelling units shall not be occupied by more than four (4) persons and single room occupancy housing units shall not be occupied by more than two (2) persons. Rooms used exclusively for sleeping purposes shall have the following minimum superficial floor area, seventy (70) square feet for one person, ninety (90) square feet for two (2) persons and the required superficial floor area shall be increased at the rate of fifty (50) square feet for each occupant in excess of two (2). However, occupancy of a sleeping room shall not exceed four (4) persons. Habitable rooms having a multiple use shall have not less than one hundred fifty (150) square feet of superficial floor area. Other habitable rooms shall have not less than seventy (70) square feet of superficial floor area, except kitchens. No habitable room other than a kitchen shall be less than seven (7) feet in any dimension.*

### Inclusionary Zoning Requirements <sup>1</sup>

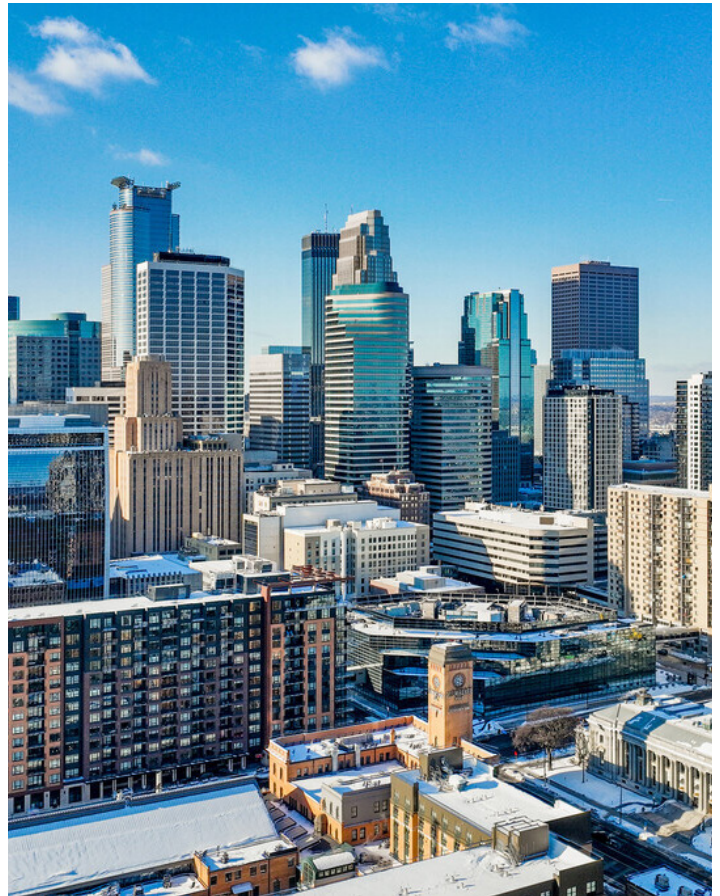
Enacted in 2020, the city’s Unified Housing Policy includes Inclusionary Zoning requirements which stipulate that residential rental projects with 20 or more units must include the following percentages of affordable units on-site, produce the required units off-site, or pay an in-lieu fee:

- 8% of total units at 60% AMI,
- 4% of total units at 30% AMI, or
- Seek city Revenue Loss Offset financial assistance from the city in exchange for 20% of total units at or below 50% AMI.

It is expected that this project would not have an issue achieving this, given the goal of the study, because all units are anticipated to be affordable to those earning well under 50% AMI.

### Minneapolis Office to Residential Conversions Ordinance <sup>2</sup>

In June 2024, Councilmembers introduced an ordinance to facilitate the conversion of existing office buildings in the downtown area. Proposed updates include accelerating review process timelines and eliminating the need for public hearings and other steps of the review process. Conversions will also not be subject to the inclusionary zoning requirements of the city’s Unified Housing Policy. The ordinance was signed into law in September 2024.



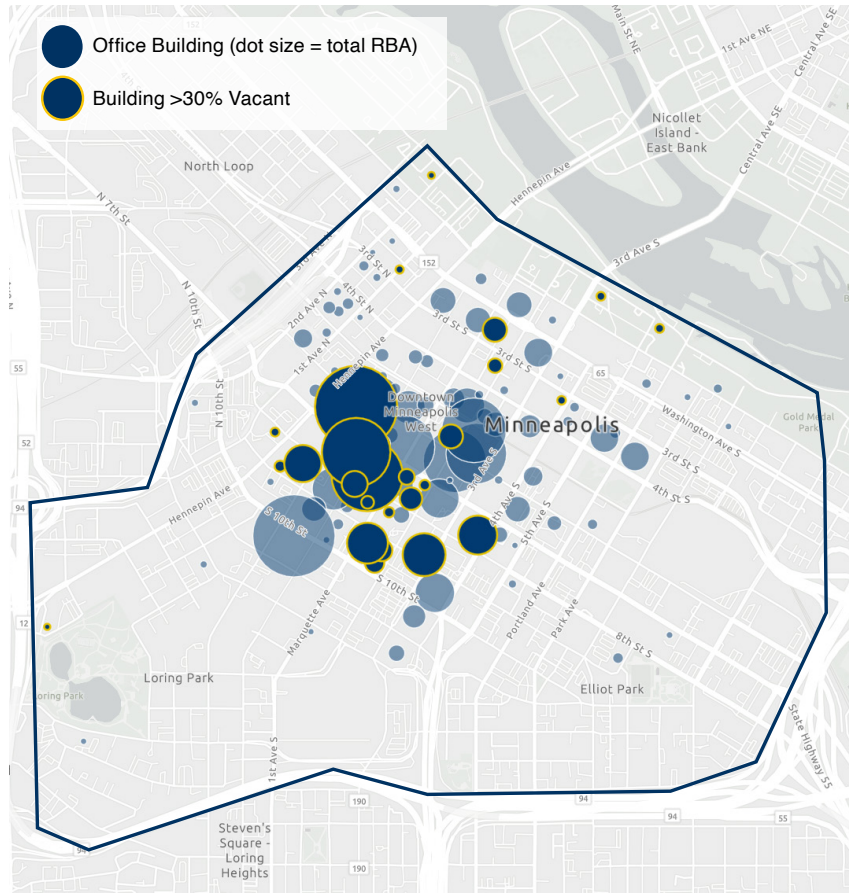
<sup>1</sup> Minneapolis Inclusionary Zoning Requirements: <https://www2.minneapolismn.gov/government/projects/cped/inclusionary-zoning/>

<sup>2</sup> Minneapolis Office to Residential Conversions Ordinance: <https://lms.minneapolismn.gov/File/2024-00705>

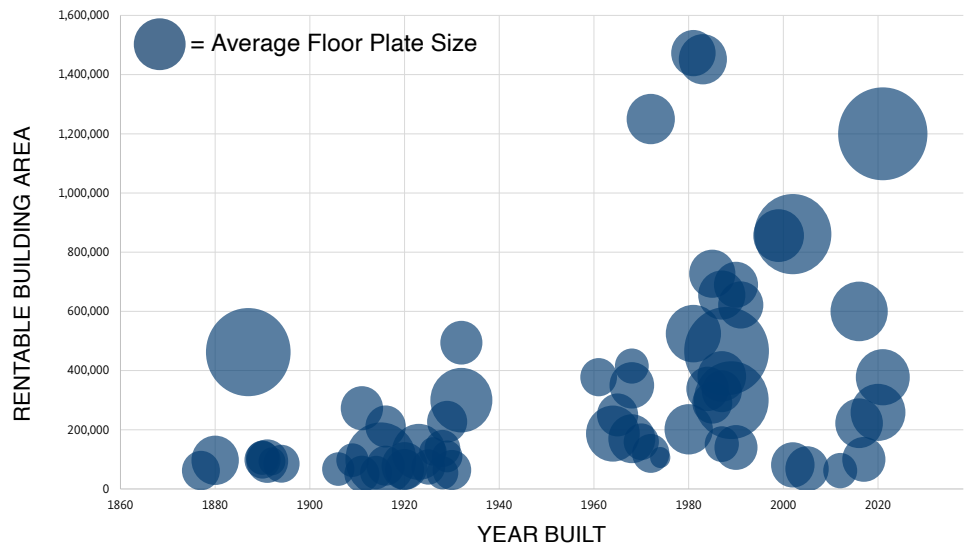
### The Minneapolis Central Business District

There are approximately 110 office buildings over 50,000 SF within what is defined as Central Minneapolis, comprising about 39 million square feet. **An estimated 66 office buildings within the boundary are at least 30% vacant.** Minneapolis has a relatively new inventory of downtown office space, with over 60% of the total square footage built since the 1980s.

### Central Minneapolis



### Downtown Office Stock (>30% Vacant)





>30% VACANT PROPERTIES	TYPE 1	TYPE 2	TYPE 3	TYPE 4
% of Building Stock	15-20% of total SF	15-20% of total SF	30-35% of total SF	25-30% of total SF
Age	1930s and Prior	1960s-1970s	1980s-1990s	2000s
Number of Floors	8	20	21	13
Average Floor Area Ratio (FAR)	4.8	12.6	9.8	8.4
Average Floorplate	20,000 SF	18,000 SF	28,000 SF	36,000 SF
Average Vacancy Rate	40%	39%	46%	60%
			<b>DOMINANT TYPOLOGY</b>	

### Office Typologies

Minneapolis’ office stock with at least 30% vacancy can be categorized into four primary typologies based on attributes such as height, floor plate size, style and year built. These factors, along with other physical attributes such as building depth and window configuration, impact their potential for conversion to traditional, market-rate residential products.

Four typologies of properties experiencing 30%+ vacancy downtown:

**Type 1:** Low- to mid-rise heritage buildings built in the 1930s and prior. Many are historic heritage properties developed during the height of the lumber and mill industry. These collectively comprise 15-20% of the existing office inventory.

**Type 2:** Mid- and high-rise buildings (averaging ~20 floors) built in the 1960s and 1970s. These properties have average floor plates of 18,000 SF and represent about 15-20% of the selected office inventory.

**Type 3:** The majority of square footage in downtown Minneapolis is within mid- and high-rise buildings (averaging ~20 floors) built in the 1980s and 1990s. The average floorplate of these properties is quite large at 28,000 SF, and together they represent 30-35% of the selected office inventory. **Type 3 was selected as the prototype for testing possible conversion feasibility as it is the dominant typology in Minneapolis.**

**Type 4:** The largest and newest buildings in downtown Minneapolis built since the 2000s. These buildings have very large average floor plates of almost 36,000 SF and comprise about 25-30% of the total office inventory.

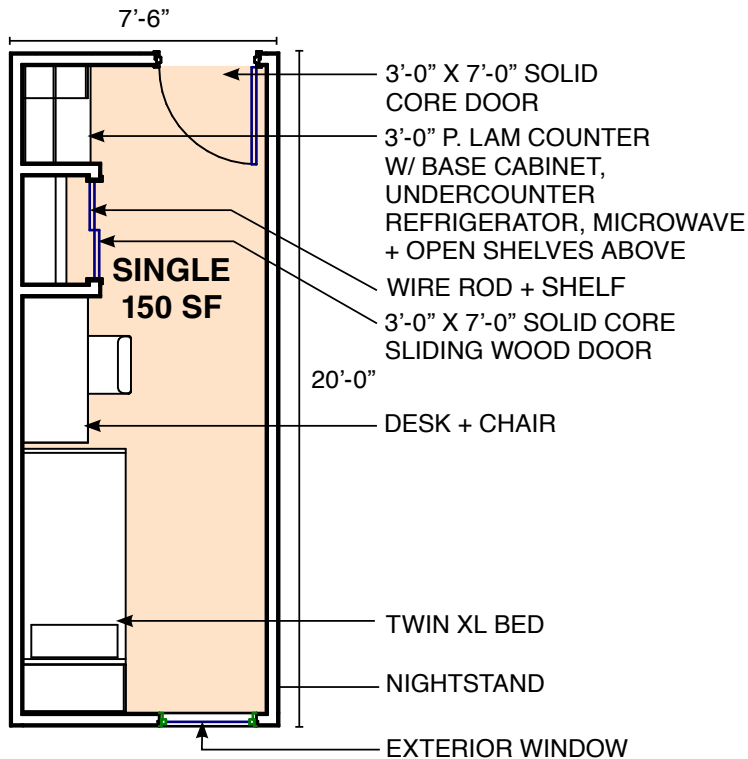
# Flexible Co-Living: Defining the Product

## Program and Unit Module

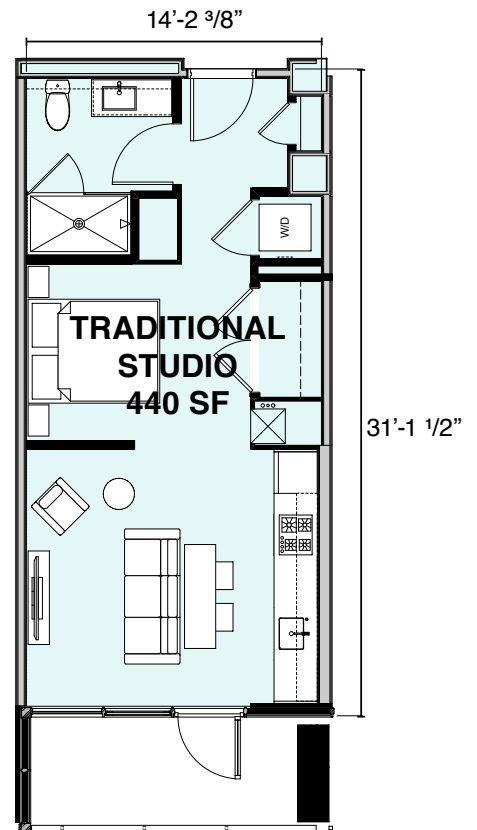
A program and unit module were developed to align with the project’s goals and conform to the city of Minneapolis’s building code.

A typical single-occupant sleeping room consists of a private room between 130 SF and 157 SF. In-room furnishings include a twin XL bed, desk and chair, and nightstand along with a microwave and standard-depth half-sized refrigerator to store personal food and beverage items. A storage shelf and cabinet can be used to store personal belongings. Each sleeping room is secured via a solid core wood door that can be locked by its occupant. Demising walls between sleeping rooms are designed with specifications to ensure the appropriate sound insulation.

A traditional studio layout of approximately 440 SF is shown as a point of comparison, which includes a full kitchen and bathroom in-unit.



Unit Module



Traditional Studio Layout

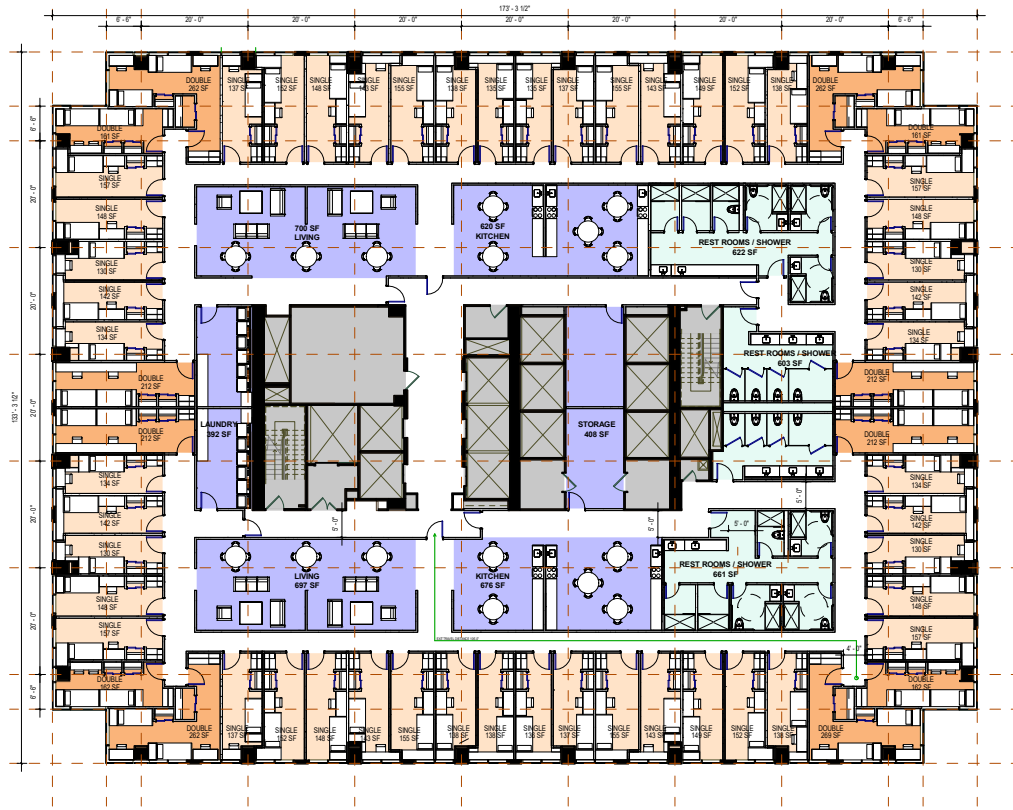
# Test Fits and Yields

## Shared Facilities and Amenity Spaces

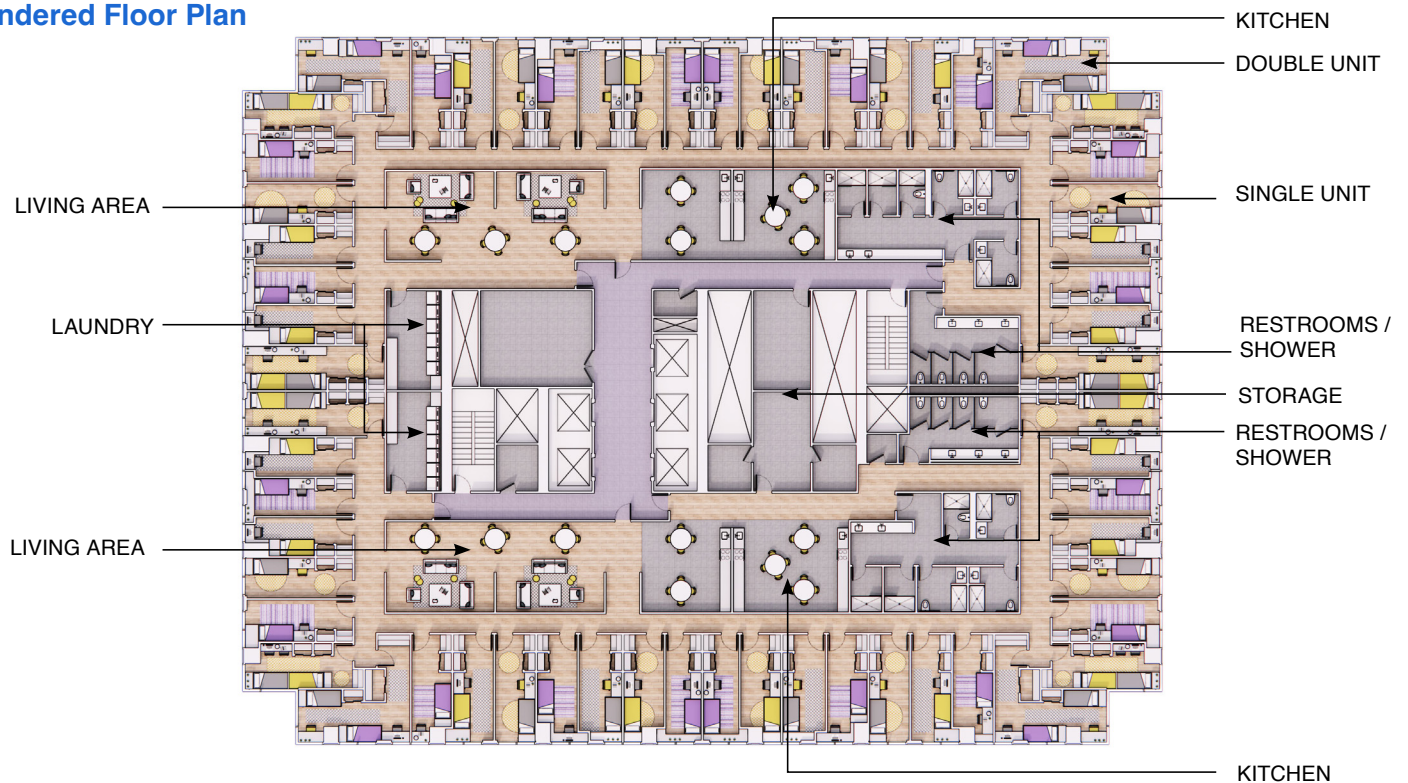
The following shared facilities are provided on each residential floor. The quantities of specific fixtures are driven by required ratios per occupant as defined by building code:

- **Kitchens:** Six shared kitchen facilities are included on each floor (clustered into two kitchen areas with three sets of fixtures each). Each kitchen facility includes standard fixtures and appliances including a sink, electric range/oven, range hood, and microwave. In lieu of a refrigerator in the kitchen area, tenants have access to their individual half-sized refrigerator located in their dwelling unit.
- **Living Room:** There are two large living areas per floor, accommodating a variety of seating areas including couches and tables.
- **Bathrooms:** Bathroom facilities are shared in the interior of the floor. There are two shower areas, each with six individual showers, four toilets, and five sinks. There are also two separate bathrooms with four toilet rooms and three sinks each, for a total of 16 toilets and 12 showers per floor.
- **Laundry:** Two laundry rooms per floor; each accommodates three washers and three dryers.
- **Storage:** A central storage area can accommodate individual storage lockers that can be locked.

Typical Floor Test Fit



Rendered Floor Plan



### Yields per Floor

The prototypical building studied has a gross floor area of 22,698 SF. Each floor can accommodate 72 beds across 48 single units and 12 double units, for a total residential area of 9,852 SF per floor. 4,971 SF per floor is dedicated to the interior amenity spaces, including bathrooms, kitchens, and living areas.

To address the large floor plate and number of occupants on each floor, the floor has been divided such that occupants can only access the half of the floor that contains their sleeping unit, thus creating two separate communities of 36 occupants per floor. Each community has access to the same quantify of shared facilities and amenity spaces.

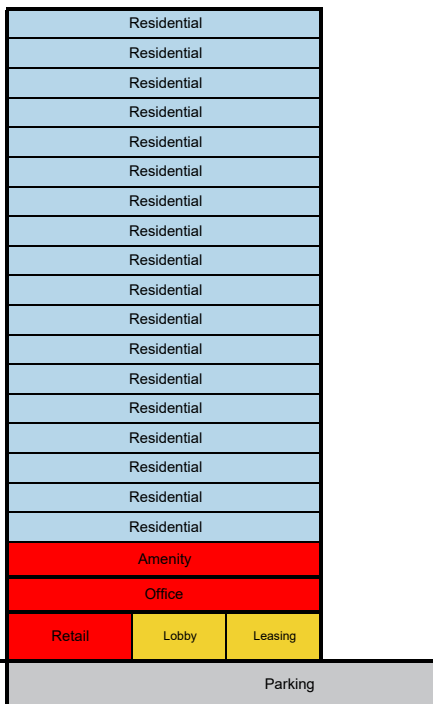
This yield produces a residential efficiency ratio of 65.3%. The remaining gross floor area is comprised of the building’s core and interior circulation.

The ratios of shared facilities/fixtures per occupant conform with Minneapolis’ building code regulations.

### Building Summary

The prototypical building studied is 21 floors. The ground floor would consist of a main lobby, a management office, and 12,712 SF of retail space. The second floor contains approximately 10,000 SF of Class B office space, and the third floor contains building-level shared amenities, including a fitness center. Parking for 343 cars and 250 bikes is included in the basement level. Floors 4-21 are dedicated for residential use, and each floor would have an identical layout.

Assuming 18 residential floors and 72 beds per floor, the building can yield a total occupancy of 1,296 occupants across 1,080 units.



### STATISTICS

Residential Area	9,852 SF per floor
Interior Amenity	4,971 SF per floor
Gross Floor Area	22,698 SF per floor
Efficiency	65.3%
Occupants	72 (12 double units, 48 single units)
	315 GSF per occupant
Toilets	16 (4.5 occupants per fixture)
Showers	12 (6.0 occupants per fixture)
Sinks	22 (3.2 occupants per fixture)
Kitchens	6 (12.0 occupants per fixture)
Washer/Dryers	6 (12.0 occupants per fixture)



Building Summary

	Levels	Floor to Floor	OA Height	Units	Parking Spaces	Bikes	Bike Room	Storage	B.O.H Services/ Mech	Common Area	Leasing/ Lobby	Interior Amenity	Retail / Office	Net Rentable Unit Area per Floor	Gross SF per Floor	EFF / Flr	Avg Unit Size
			224.00						SF	SF	SF	SF		SF	SF		SF
Residential	21	11.00	224.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	20	11.00	213.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	19	11.00	202.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	18	11.00	191.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	17	11.00	180.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	16	11.00	169.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	15	11.00	158.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	14	11.00	147.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	13	11.00	136.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	12	11.00	125.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	11	11.00	114.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	10	11.00	103.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	9	11.00	92.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	8	11.00	81.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	7	11.00	70.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	6	11.00	59.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	5	11.00	48.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Residential	4	11.00	37.00	60				408	2,354	5,113		4,971		9,852	22,698	65.3%	164
Amenity Floor	3	11.00	26.00	0					2,354	10,344		10,000			22,698		
Office	2	11.00	15.00	0					2,354	10,344			10,000		22,698		
Ground Floor	1	15.00	0.00	0	0				2,354	2,000	5,632		12,712		22,698		
Basement Parking	B	11.00			343	250	2,500										
	Floors			Units	Parking Spaces	Bikes	Bike Room	Storage	B.O.H Services/ Mech	Common Area	Leasing/ Lobby	Interior Amenity	Commercial	Net Rentable Unit Area	GSF		Avg Unit Size
Totals	21		224	1,080	343	250	2,500	7,344	49,434	114,722	5,632	79,594	22,712	177,336	476,658		164

# Meeting the Market: Rents and Users

## Quantifying the Market for Flexible Co-Living

Initial market research suggests that there is a notable potential market for the flexible co-living concept. According to data from the American Community Survey, within the city of Minneapolis, 51% of the city's 196,000 households are renters. Of these 101,000 households, 53% are single-occupant, and only 10% are comprised of four people or more.

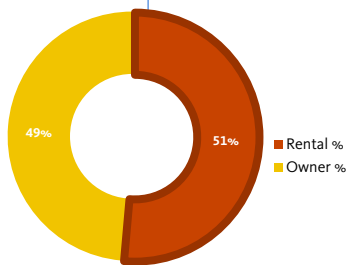
The household incomes of Minneapolis' single-occupant renters are relatively moderate. Approximately 21% or 11,000 single-occupant households earn between \$20,000 and \$40,000 per year.

27% of Minneapolis-area renters are considered severely cost-burdened, meaning they pay more than 50% of their income for rent. 50% of all Minneapolis-area renters spend more than 30% of income on rent.<sup>1</sup>

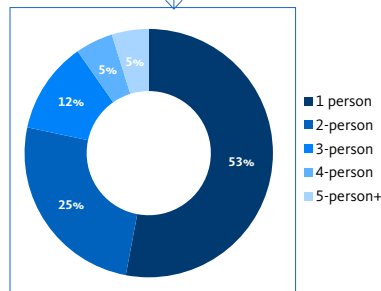
The quantity of single-person renter households earning less than \$40,000 per year, or approximately 50% of the Area Median Income (AMI), suggests a sizable market for the flexible co-living typology. The single-occupant model offers a more affordable but market-rate product that aligns with renters' incomes and housing budgets.

**There are 101,000 renter households in the city of Minneapolis and 53% (53,000) of them are Single-Occupant**

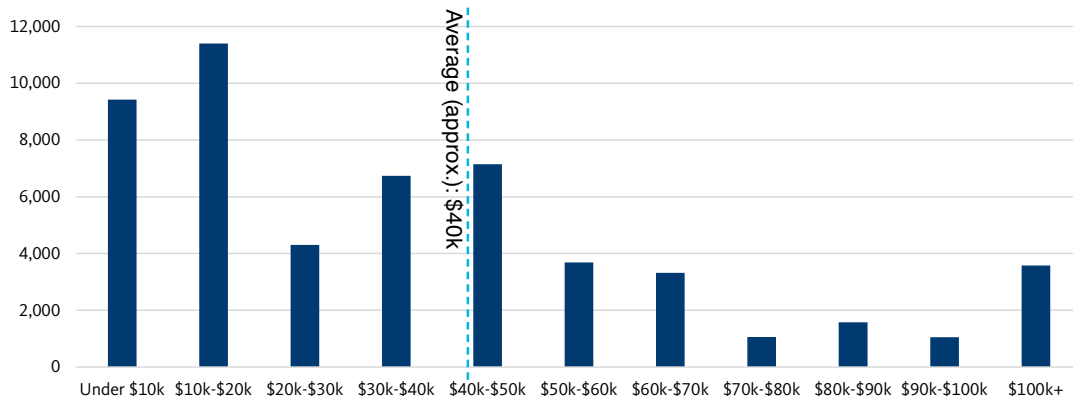
Household Tenure



Renters by Household Size



Single-Person Renters by Household Income



<sup>1</sup> The State of the Nation's Housing, Harvard Joint Center on Housing Studies [https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard\\_JCHS\\_State\\_Nations\\_Housing\\_2022.pdf](https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_State_Nations_Housing_2022.pdf)

Source: American Community Survey Public Use Microdata Sample (PUMS) 2022 1-Year Estimates. Selected Public Use Microdata Area (PUMA) geographies: Hennepin County--Minneapolis (North) & St. Anthony Cities PUMA; Hennepin County--Minneapolis City (East) PUMA; Hennepin County--Minneapolis City (Southwest) PUMA; Hennepin County--Minneapolis City (Central) PUMA

### Potential Rents

Based on the distribution of single-person renter households in Minneapolis, there are approximately 11,000 individuals who earn between \$20,000 and \$40,000 per year.

HUD standards define a monthly housing budget as 30% of monthly income. Within this income bracket, households have a supportable housing budget of \$500 to \$1,000 per month. A \$500 to \$1,000 monthly housing budget would correspond to approximately 20-50% of local Area Median Income (AMI) levels for single-person households.

The median monthly rent for a market-rate unit in the city of Minneapolis is currently \$1,399. As such, the housing budgets of this segment are lower than the rents of most existing and available product within the city.

Developing the flexible co-living product at rents between \$500 and \$1,000 per bed per month would meet the target resident’s housing budget in the market and provide an affordable option as compared to other available housing, delivering new supply at a significant discount to other market-rate offerings.

HH Income	Count	HH Income		Monthly Housing Budget (30%)		AMI (Average)
		Low	High	Low	High	
Under \$10k	9,420	\$0	\$9,999	\$0	\$250	~<20% AMI
\$10k-\$20k	11,400	\$10,000	\$19,999	\$250	\$500	~<20% AMI
<b>\$20k-\$30k</b>	<b>4,310</b>	<b>\$20,000</b>	<b>\$29,999</b>	<b>\$500</b>	<b>\$750</b>	<b>~20-35% AMI</b>
<b>\$30k-\$40k</b>	<b>6,740</b>	<b>\$30,000</b>	<b>\$39,999</b>	<b>\$750</b>	<b>\$1,000</b>	<b>~35-50% AMI</b>
\$40k-\$50k	7,150	\$40,000	\$49,999	\$1,000	\$1,250	~50-60% AMI
\$50k-\$60k	3,690	\$50,000	\$59,999	\$1,250	\$1,500	~60-70% AMI
\$60k-\$70k	3,320	\$60,000	\$69,999	\$1,500	\$1,750	~70-80% AMI
\$70k-\$80k	1,060	\$70,000	\$79,999	\$1,750	\$2,000	~80-90% AMI
\$80k-\$90k	1,580	\$80,000	\$89,999	\$2,000	\$2,250	~90-100% AMI
\$90k-\$100k	1,050	\$90,000	\$99,999	\$2,250	\$2,500	~100%+ AMI
\$100k+	3,580	\$100,000	\$1,000,000	\$2,500	\$25,000	~100%+ AMI

\$500-\$1,000  
Target Per Bed Rent  
Range

Source: American Community Survey Public Use Microdata Sample (PUMS) 2022 1-Year Estimates. Selected Public Use Microdata Area (PUMA) geographies: Hennepin County--Minneapolis (North) & St. Anthony Cities PUMA; Hennepin County--Minneapolis City (East) PUMA; Hennepin County--Minneapolis City (Southwest) PUMA; Hennepin County--Minneapolis City (Central) PUMA

# Operating Model and Financial Feasibility

Baseline project assumptions include industry standard and local market benchmarks to evaluate the feasibility of the project without additional subsidy. The following pages identify various levers that a developer could utilize in order to arrive at marketable returns for unlevered and levered internal rates of return (IRR).

For this project, rents for singles are assumed at \$750 per month, which would be affordable for a single-person household earning 35% of AMI.

Double units are rented at \$550 per bed per month, would be affordable for a single-person household earning 26% of AMI.

The HUD voucher available to pay for units like these allows rents in Minneapolis up to \$915 in the current fiscal year, well above projected rents for this building. For comparison, a typical studio apartment in downtown Minneapolis rents for approximately \$1,100 per month as of August 2024.

## PROJECT OPERATING ASSUMPTIONS

Rent/Bed	Per Month per Person	Annualized
Singles	\$750	\$9,000
Doubles	\$550	\$6,600
<b>Avg Weighted Rent</b>	<b>\$683</b>	<b>\$8,200</b>
<b>Vacancy/Rent Loss</b>		<b>10%</b>
<b>Total Operating Expenses (OpEx) / SF</b>		<b>\$14.50</b>
Management Fee (%EGI)		2.5%
OpEx Ratio (as a % of total revenue)		47%
<b>Capital Reserves/Unit</b>		<b>\$400</b>
<b>Rent Escalation</b>		<b>3%</b>
<b>OpEx Escalation</b>		<b>3%</b>

## PROJECT PROGRAM

Units Per Floor	60	Beds/ Floor	72
Singles	48	80% Singles	48
Doubles	12	20% Doubles	24
<b>Total Units</b>	<b>1,080</b>	<b>Total Beds</b>	<b>1,296</b>

## OTHER INCOME

Parking Spaces	343 spaces	\$50/month
Bike Spaces	250 spaces	\$10/month
Office SF	10,000 SF	\$18/SF
Retail SF	12,712 SF	\$20/SF

**OPERATING ASSUMPTIONS**

**Rent & Vacancy**

Monthly rents of \$750 per month per person for singles and \$550 per month per person for doubles align with the target market’s housing budget and AMI levels of 30-50%. 3% annual rent and operating expense escalation rates align with market benchmarks for this type of product.

Other revenues include \$50/month for car parking, \$10/month for bike parking, plus net office rent of \$18/SF and retail rent of \$20/SF to align with market benchmarks.

A 10% average vacancy rate exceeds the average market-rate vacancy rate in Minneapolis, reflecting a risk premium and is in line with typical vacancy rates for similar concepts elsewhere.

**Operating Expenses**

A total annual operating expense cost of \$14.50/SF is based on industry benchmarks for multi-family buildings within this market and includes utilities, repairs, maintenance, management, and insurance. This includes a higher insurance cost to account for higher anticipated insurance premiums associated with the product. Operating expenses as a percentage of total revenue average 47%, higher than typical multi-family benchmarks but reflective of higher operating costs associated with the product.

No real estate taxes have been included at this time.

**Capital Reserves**

Annual capital reserves of \$400 per bed are included to account for capital improvements and necessary unit refresh upon resident move-outs.

**DEVELOPMENT COST ASSUMPTIONS**

**Construction Costs**

Turner Construction Company was engaged to develop construction cost estimates for the prototypical building and test fit studied. The key variables in estimating construction costs are the quality of the building’s existing mechanical, electrical, and plumbing (MEP) systems and the degree of anticipated interior demolition. These are heavily dependent on individual building conditions.

Turner developed a high and low cost range for two existing building conditions. The high range Option 1 assumes selective demolition of all floors and full replacement of HVAC and electrical systems. Option 2 assumes the reuse of existing HVAC and electrical systems plus the reuse of 50% of the existing shell space. In practice, developers are more likely to seek out and prioritize buildings for conversion that have the most intact systems to minimize MEP costs. Thus, **\$278/GSF in hard costs**, within the Option 2 range, is used for modeling purposes. Additional due diligence on a per-building basis would be required to refine cost estimates further.

<b>CONSTRUCTION COST ESTIMATES</b>	<b>OPTION 1</b>	<b>OPTION 2</b>
<i>Selective Demolition</i>	<i>Demo at all floors</i>	<i>50% of existing shell maintained</i>
<i>Hazardous Materials Abatement</i>	<i>Includes abatement allowance</i>	<i>Abatement not required</i>
<i>Fire Protection</i>	<i>Existing systems reused</i>	<i>Existing systems reused</i>
<i>Plumbing</i>	<i>Existing service/stacks reused</i>	<i>Existing service/stacks reused</i>
<i>HVAC</i>	<i>New systems required</i>	<i>Existing systems reused</i>
<i>Electrical</i>	<i>New systems required</i>	<i>Existing systems reused</i>
<b>Construction Cost Estimate</b>	<b>\$329/GSF</b>	<b>\$278/GSF</b>
<i>Low-High Estimate</i>	<i>\$312 - \$362/GSF</i>	<i>\$264 - \$306/GSF</i>

An industry-standard soft cost estimate of 15% of hard costs is included to account for architectural, engineering, permitting, and legal fees. A 5% contingency on hard & soft costs was also added per standard practice. \$5,000 per bed in furnishings, finishes, and equipment (FF&E) is also included.

### Acquisition Costs

Due to the unknown dynamics of a potential development scenario, additional due diligence will be required on a per-building basis to identify a reasonable acquisition cost. Variables that would likely impact property value at the time of purchase include operating income, market cap rates, building condition, and available sales comps.

In addition to property value, there are multiple likely development scenarios for this product typology. These include, but are not limited to: the existing property owner self-develops the conversion; the existing property owner contributes the land as collateral in a joint-venture development; a foreclosed or bank-owned property is purchased by a developer at a discounted purchase price; a potential land swap between property owners; or a standard purchase at market value.

The development pro forma includes a purchase price/acquisition cost of **\$30/GSF or \$14 million**.

### Financing Assumptions

The project assumes traditional debt and equity and no public financing or other forms of assistance. Industry benchmark loan assumptions of 65% loan-to-value (LTV) and a 30-year amortization are used for permanent financing. The remaining 35% of project costs is expected to be sourced through equity.

Interest rates are assumed at 6.0% for permanent financing and 10% for the construction period. An exit cap rate of 5.75% is assumed during reversion in year 10 with a 3.0% sale commission.

DEVELOPMENT COSTS	TOTAL	PER GSF	PER BED	PER UNIT
Land/Building Purchase	\$14.30M	\$30		
Construction (Hard) Costs	\$132.51M	\$278	\$102,200	\$122,700
Soft Costs (15%)	\$19.88M	\$42		
Contingency (5%)	\$7.62M	\$16		
FF&E <sup>1</sup>	\$6.48M	\$14	\$5,000	
<b>Total Project Costs</b>	<b>\$180.79M</b>	<b>\$379</b>	<b>\$139,500</b>	<b>\$167,400</b>

### PROJECT FINANCING ASSUMPTIONS

Debt Loan-to-Value (LTV)	65%
Equity	35%
Permanent Loan	6.0%
Construction Period Loan	10.0%
Permanent Loan Period	30-Years
Exit Cap Rate	5.75%
Terminal Sale Commissions	3.0%

5-YEAR CASH FLOW (\$ millions)	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Rental Income <sup>2</sup>		10.95	11.27	11.61	11.96	12.32
Vacancy Loss		-4.38	-1.13	-1.16	-1.20	-1.23
Other Income <sup>3</sup>		0.69	0.73	0.80	0.90	1.04
Effective Gross Revenue		7.26	10.88	11.25	11.67	12.13
Operating Expense		-4.86	-5.09	-5.25	-5.41	-5.58
Capital Reserves		0.00	-0.46	-0.47	-0.49	-0.50
<b>NOI</b>		<b>2.40</b>	<b>5.33</b>	<b>5.53</b>	<b>5.77</b>	<b>6.05</b>
<b>Total Before Tax Cash Flow</b>	<b>-194.90</b>	<b>2.40</b>	<b>5.33</b>	<b>5.53</b>	<b>5.77</b>	<b>6.05</b>
Terminal Value (Yr 10), Net Cost of Sale	175.27					
<b>Unlevered IRR</b>	<b>2.3%</b>					
<b>Levered IRR</b>	<b>-1.2%</b>					
<b>Equity multiple - Exit year</b>	<b>1.23</b>					

<sup>1</sup> Furnishings, Finishes, and Equipment

<sup>2</sup> Average weighted rent of \$8,200 per bed times 1,296 beds; at a 3% annual escalation

<sup>3</sup> Assumes a 2-year stabilization/lease-up period and a stabilized occupancy of 90%

<sup>4</sup> Total annual retail rent, office rent, parking and bike parking monthly fees. 3% annual escalation.

<sup>5</sup> OpEx is calculated on GSF and includes common area maintenance, operations, insurance, and management fees. 3% annual escalation.

## Returns

The project's feasibility was evaluated by developing an operating pro forma and financial model, employing industry-standard methodologies and metrics.

Two key metrics for assessing project performance are the unlevered and levered Internal Rate of Return (IRR). IRR measures both the project's performance and profitability, indicating the expected return on initial capital investment. Property developers and investors use preferred benchmark thresholds for both unlevered and levered IRRs when evaluating a project's financial feasibility.

Unlevered IRR assesses general project feasibility and does not calculate the impact of project financing. Lending institutions typically review a project's unlevered IRR as part of the underwriting process.

Levered IRR measures an investor's return on their project contribution. Generally, projects with attractive levered IRRs can draw investors by generating sufficient Net Operating Income (NOI) to repay investments. Individual risk tolerances determine an investor's preferred levered IRR thresholds.

## Scenarios

The baseline scenario assumes conservative conditions, including market-rate, undiscounted acquisition costs, traditional market-rate financing, and no local public assistance. In reality, interested developers are likely to pursue a number of strategies to reduce development costs by leveraging programs and other subsidies available to them, often with public subsidy or other support.

The city of Minneapolis is actively pursuing a number of strategies to offer assistance to facilitate office-to-residential conversions through its Office to Residential Conversions Amendment ordinance introduced in June 2024. As a result, the success of alternative financing and project grants is perhaps more likely here than in other cities.

Public subsidies are typically available as grants or loans. Grants directly offset total development costs, reducing the project's overall cost. Grants effectively lower the required equity and debt, positively impacting both the levered and unlevered IRR.

Public subsidies can also be repayable loans with more favorable debt terms compared to traditional lending, such as a lower interest rate or a higher loan-to-value ratio (i.e. less investor equity is required). These terms can reduce the annual cost of debt service on the loan, primarily impacting levered IRR by leaving more residual cash flow for investor returns.

To test the impact of these conditions on the baseline scenario, three alternative scenarios were developed based on the relative availability and ease of applying for and securing the various potential forms of assistance. Scenario 1 assumes a relatively low effort, while Scenario 3 requires a high degree of coordination with multiple public entities, though still within the range of possibility.



**Scenario 1: No Acquisition Costs**

Alternative Scenario 1 assumes no acquisition costs. This can be achieved in cases where a building is vacant or underperforming to the point where it no longer provides any value in its current state and is acquired at essentially no net cost to the buyer. Alternatively, municipalities sometimes purchase underperforming properties and donate them to developer entities as a form of public assistance for redevelopment purposes.

**Scenario 2: No Acquisition Costs, Local Grant**

In addition to no acquisition costs, Scenario 2 assumes local assistance in the form of a grant equal to 5% of project construction costs.

**Scenario 3: No Acquisition Costs, Local Grant, Below-Market Financing**

Alternative Scenario 3 assumes no acquisition costs, the local grant, plus below-market financing in the form of a low-interest loan that could be offered to the project through one of several national or local programs. The below-market loan is assumed to offer a 40-year amortization, preferred interest rate of 4.75%, and 75% LTV. This is in comparison to the market-rate 30-year amortization, 6.0% interest rate, and 65% LTV used in the prior scenarios. This form of assistance produces lower annual debt service costs and a higher net operating income.

SUBSIDY/ INCENTIVE	TYPE OF FUNDING	SOURCE		UNLEVERED IRR IMPACT	LEVERED IRR IMPACT
No Acquisition Costs	Grant	Local	City could purchase a building and donate to developer at no cost	X	X
Local Grant	Grant	Local	City fund or local funding mechanism such as TIF (Tax Increment Financing)	X	X
Below-Market Financing	Loan	Local, State, or Federal	Low-interest rate loan offered through existing local, state, or federal program (e.g. HUD)		X

SCENARIO 0: \$30/SF Acquisition		SCENARIO 1: No Acquisition Costs		SCENARIO 2: No Acquisition Costs Subsidy Grant		SCENARIO 3: No Acquisition Costs Subsidy Grant 4.75% Debt/75% LTV	
<b>RETURNS</b>		<b>RETURNS</b>		<b>RETURNS</b>		<b>RETURNS</b>	
Acquisition Cost	\$14.3M	Acquisition Cost	\$0	Acquisition Cost	\$0	Acquisition Cost	\$0
Subsidy/Equity	\$0	Subsidy/Equity	\$0	Subsidy/Equity	\$9.1M	Subsidy/Equity	\$9.1M
Total Project Costs Net of Subsidy	\$180.8M	Total Project Costs Net of Subsidy	\$166.5M	Total Project Costs Net of Subsidy	\$157.4M	Total Project Costs Net of Subsidy	\$157.4M
Debt	6.0%/ 30-yr amort	Debt	6.0%/ 30-yr amort	Debt	6.0%/ 30-yr amort	Debt	4.75%/40-yr amort
Unlevered IRR	2.3%	Unlevered IRR	3.2%	Unlevered IRR	3.8%	Unlevered IRR	3.8%
Stabilized NOI	\$5.33M	Stabilized NOI	\$5.33M	Stabilized NOI	\$5.33M	Stabilized NOI	\$5.33M
Levered IRR	-1.2%	Levered IRR	1.5%	Levered IRR	3.1%	Levered IRR	4.8%
Equity Multiple	1.23	Equity Multiple	1.48	Equity Multiple	1.66	Equity Multiple	1.84
Stabilized DCR	0.62	Stabilized DCR	0.68	Stabilized DCR	0.72	Stabilized DCR	0.80

### Findings and Implications

Under the different scenarios tested, the project produces an unlevered IRR between 2.3% and 3.8% and a levered IRR between -1.2% and 4.8%. These thresholds are not feasible for market-rate housing, but the financials indicate much lower levels of subsidy needed than for other affordable housing for similarly low and moderate-income residents.”

Regardless of the return metrics, the flexible co-living concept and model succeeds in its ability to deliver much-needed housing at a lower cost. It is estimated that this concept can deliver a dwelling unit with a baseline development cost of approximately \$167,300 per unit, while the current cost of developing a traditional studio unit in the city of Minneapolis may far surpass \$400,000 per unit.<sup>1</sup> If subsidy dollars could be dedicated to this concept, the units produced per dollar of public assistance can greatly exceed what is generated under existing housing delivery models since the cost per bed is less than half the cost of building a standard studio. This model of subsidizing cost-effective co-living units could be a good fit for Minneapolis’ specific law that authorizes this housing type if it is operated by non-profits.

Furthermore, the concept provides more opportunities for conversion feasibility from a design perspective. The building’s large floor plate size and significant building depth limit design feasibility for a traditional market-rate office-to-residential conversion, but work well for the co-living model. Supporting the concept could expand the share of convertible office buildings, putting additional properties into productive use that would otherwise remain vacant or underutilized.

As housing affordability continues to erode and downtown office vacancy rates remain elevated, this concept can unlock additional office-to-residential conversion opportunities. Policymakers can consider supporting the implementation of office-to-flexible co-living conversions due to the outsized impact that the concept has on housing production in an area of critical need. If successful, cities will be able to deliver low-cost housing in a much more efficient and cost-effective manner, providing thousands of secure, modern, and attractive homes to our nation’s downtowns.

<sup>1</sup> Gensler benchmark study of studio construction costs, September 2024

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# SEATTLE, WASHINGTON



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Pew Gensler

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# SEATTLE, WASHINGTON

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# Seattle: Existing Conditions, Regulatory Overview, and Building Stock

## The State of Housing in Seattle

Seattle has experienced rapid growth over the last several decades, and while the city experienced a slight decrease in rents during the worst of the Covid-19 pandemic, recent trends suggest that affordability in the city continues to erode. According to Apartment List data, between 2018 and 2023, the overall median rent in the city of Seattle increased 6% and is \$2,031 per month as of July 2024.

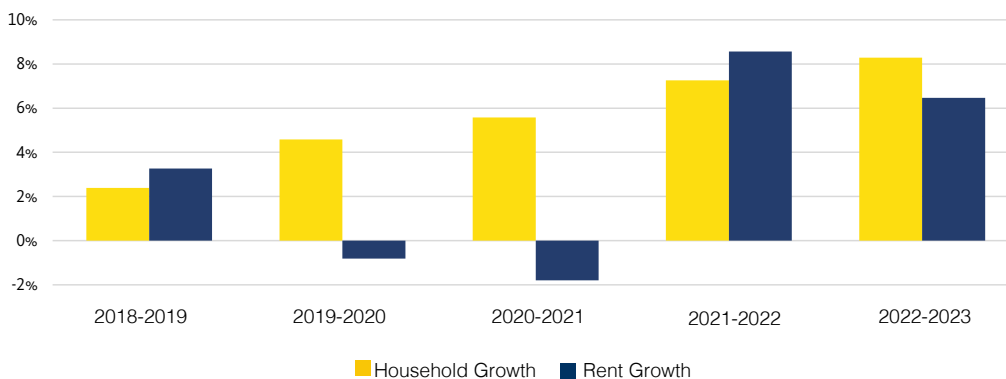
Rising housing costs have contributed to a homelessness estimate of over 16,000 individuals in King County according to recent estimates conducted by the King County Regional Homelessness Authority. A rate of 59.4 per 10,000 inhabitants far exceeds the national average and is one of the highest rates among major cities in the country.<sup>1</sup> Simultaneously, downtown office vacancy rates average 30%.<sup>2</sup>

## The Opportunity

The opportunity to introduce affordable co-living housing in Seattle is promising: There are no significant local regulatory barriers that often prohibit flexible co-living residential typologies, and similar co-living models have proved successful in the city in the past decade. Initial conversations suggest that there is notable local political will to encourage new housing typologies, along with other solutions to address housing unaffordability and rising homelessness and housing insecurity.

Several local programs that support these goals are already underway or in development, and can be leveraged to enhance the viability of this housing model.

## Household and Rent Growth (Cumulative)



**2018-2023:**

**HOUSEHOLDS:**

**+9%**

**RENT:**

**+6%**

<sup>1</sup> HUD Annual Homeless Assessment Report 2023 Point-in-Time Estimates by CoC <https://huduser.gov/portal/datasets/ahar/2023-ahar-part-1-pit-estimates-of-homelessness-in-the-us.html>

<sup>2</sup> Colliers Downtown Commercial Vacancy Rate Q4 2023 <https://www.colliers.com/en/research/puget-sound/q3-2024-seattle-office-report>

Chart Data Sources: Apartment List National Rent Report (as of July 2024) <https://www.apartmentlist.com/research/national-rent-data>, Esri Business Analyst

# Seattle at a glance:



**MEDIAN  
RENT**

**\$2,031**



**HOMELESSNESS  
RATE**

**59.4 per 10k**



**DOWNTOWN  
OFFICE  
VACANCY**

**30%**



**REGULATORY  
BARRIERS**

**MEDIUM**

Seattle uses International Code Council (ICC) with Amendments. Currently, 2018 is the base code. The city is adopting the 2021 code on November 15, 2024.

### SEATTLE LAND USE CODE

23.84A.032.10 outlines the definition of congregate residences, which would apply to the concept:

“Congregate residence” means a use in which rooms or lodging, with or without meals, are provided for any number of non-transient persons not constituting a single household.

### Existing Structure Conversion

Seattle City Council passed and the Mayor on July 11, 2024 signed into law a new section of the Seattle Land Use Code. Section 23.40.080 outlines constraints and incentives for conversion of existing buildings to residential. Generally the provisions stipulate the following:

- Cannot expand a building horizontally, except for ADA, energy, safety, mechanical, bays, etc.
- Cannot expand a building vertically beyond 15’ for residential use or rooftop features for residential use - penthouses and mechanical can be accommodated above.
- The existing building must have a temporary or permanent certificate of occupancy prior to March 1, 2024.
- Can change a non-residential use on a floor to residential within the structure.
- Does not increase the square footage of non-residential uses in the structure.
- Located in a commercial zone, a Downtown zone, a Seattle Mixed (SM) zone, the Highrise (HR) zone, or the Midrise (MR) zone.
- Exempt from design review.
- Exempt from requirements under Chapter 23.58C (Mandatory Housing Affordability for Residential Development).

### Congregate Living

Under the Seattle Land Use code congregate living is allowed under 23.42.049.

Congregate residences are subject to the development standards for the zone in which they are located, to the development standards for apartments where such housing type standards are specified, and to the following requirements:

- At least one complete common food preparation area is required within the congregate residence, and all residents shall have access to either a common complete food preparation area or a food preparation area within a sleeping room.
- Within a congregate residence not more than 25 percent of sleeping rooms shall have complete food preparation areas. This percentage can be increased for certain educational related living or non-profit supportive housing use.
- Communal areas such as common kitchens, lounges, recreation rooms, dining rooms, living rooms, foyers and lobbies, that are accessible to all residents of the congregate residence with sufficient accommodations for socializing and meeting shall be provided, and shall meet the following standards:
  1. At least 15 percent of the total floor area of all sleeping rooms.
  2. Service areas, including, but not limited to hallways and corridors, supply or janitorial storage areas, operations and maintenance areas, staff areas and offices, and required bicycle parking areas may not be counted toward the communal area requirement.
  3. Communal areas are required in addition to any residential amenity area that is required in the zone.

## Substantial Alterations

Under the Seattle Land Use Code, substantial alterations are defined as “remodeling or an addition that substantially extends the useful physical or economic life of the building or a significant portion of the building, other than typical tenant remodeling.” The code allows the city to ask for current code compliance for the following major building systems:

- Structural Framing
- Building Envelope
- Mechanical/HVAC
- Plumbing
- Electrical
- Conveyance

There is no dollar threshold defining the substantial alteration. The City has previously stated that these instances would be evaluated on a case by case basis, but as of August 2024 the City has yet to provide any official guidance in writing. Structural framing would likely have the largest impact on potential cost, but costs are highly dependent on the existing age, construction typology, and condition of the building to be converted.

Seattle is proposing to adopt a suite of construction codes that incorporates National, State, and Seattle amendments. These significant changes, which incorporate amendments to the 2021 IBC (International Building Code) and IEBC (International Existing Building Code), will be applicable to applicants starting November 15th, 2024. Previous Seattle Building Codes utilized an amended IBC 2018.

Under the 2021 Seattle Code, the building use is most appropriately classified as Residential Group R-2, which includes congregate living facilities of a non-transient nature with more than 16 occupants.

Per Section 1202 Ventilation, Subsection 1202.1 General, mechanical ventilation is acceptable in lieu of natural ventilation.

Per Section 1204 Lighting, “Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings... or shall be provided with artificial light in accordance with Section 1204.3.” Section 1204.3 dictates a minimum footcandle target for lighting. Thus, artificial lighting in spaces intended for human occupancy is acceptable.

## GREEN BUILDING REQUIREMENTS

Buildings will eventually need to comply with Seattle Building Emissions Performance Standard (BEPS) which dictates that buildings need to be net-zero by 2050 or earlier, depending on building size and type. By 2027 (for the largest buildings), owners must document current emissions performance and building equipment, develop plans and start actions needed to meet upcoming greenhouse gas intensity (GHGI) targets.

## SB 6175

Washington State recently passed SB 6175, which allows Washington cities to establish a sales tax deferral/exemption program for construction expenses related to conversions of underutilized commercial buildings into affordable housing. In order to receive a deferral under the new law, the project must consist of multifamily housing units with at least 10% considered affordable to households earning no more than 80% of the area median income, and it must be located on what the city considers underutilized commercial property.

If a project maintains those qualifications for at least ten years, the sales and use taxes would not need to be repaid.



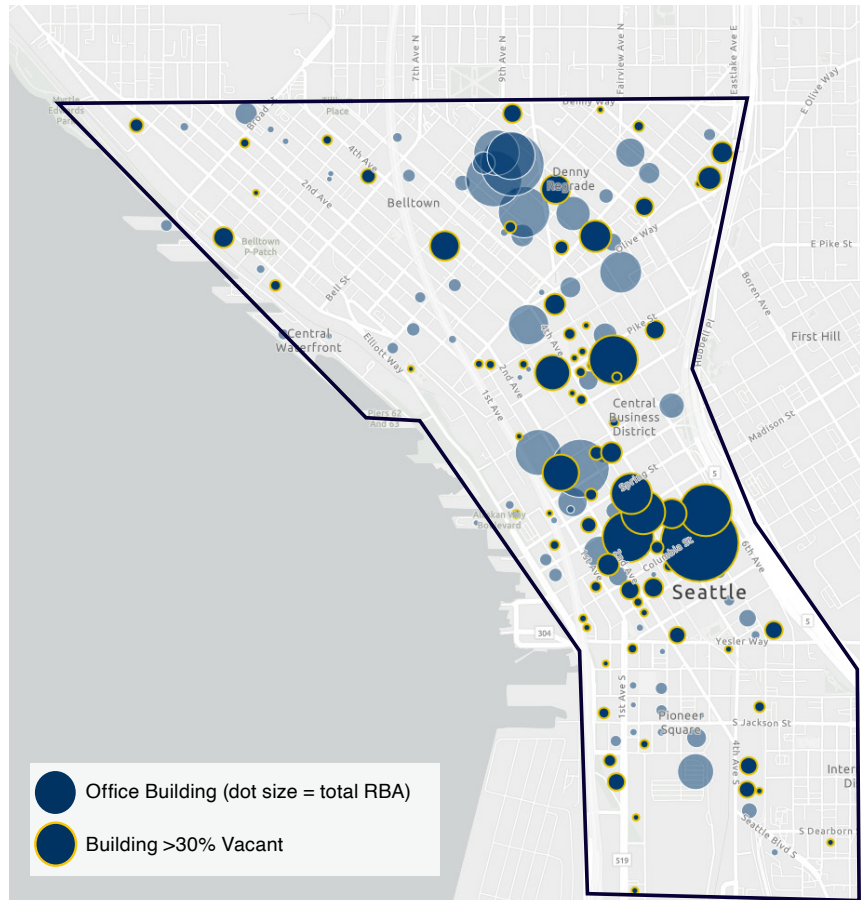
### Seattle's Central Business District

There are approximately 198 office buildings over 50,000 SF within Seattle's Downtown zoning area boundary, comprising about 57 million square feet. **An estimated 129 office buildings within the boundary are at least 30% vacant.**

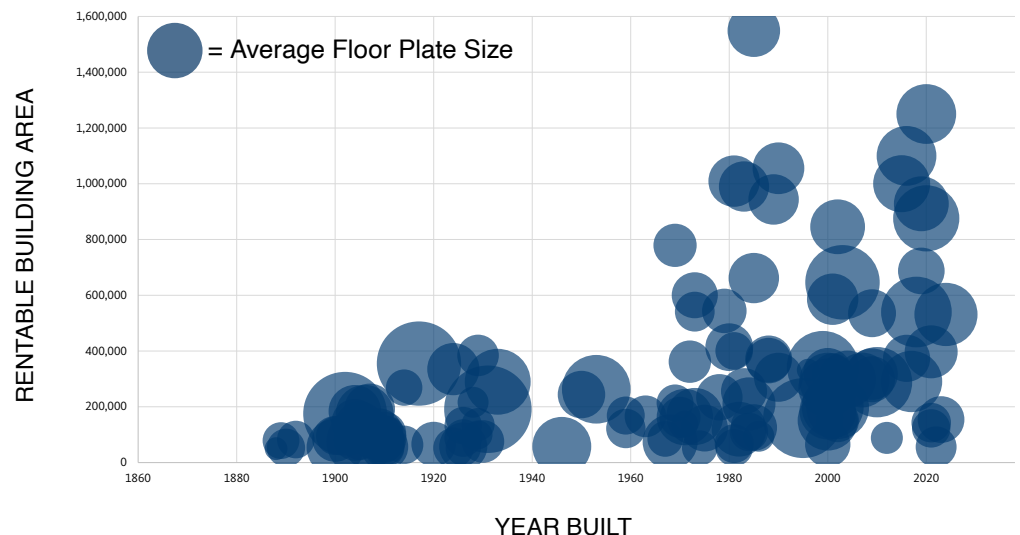
As a relatively newer central business district in terms of total supply, Seattle has a relatively moderate stock of office buildings constructed prior to the 1980s compared to other cities nationwide. Since then, the rise of large corporate and tech tenants led to a sustained office building boom in the 2000s through the present, and there were concerns of oversupply even before the onset of the Covid-19 pandemic.

Seattle lost approximately 16,200 apartment and single-room occupancy units in its downtown from 1960 to 1973, according to a 1978 report from the U.S. Senate Committee on Aging. Office to co-living conversions could replenish some of that lost housing stock.

### Seattle Downtown Area



### Downtown Office Stock (>30% Vacant)





>30% VACANT PROPERTIES	TYPE 1	TYPE 2	TYPE 3	TYPE 4
% of Building Stock	<20% of total SF	~40% of total SF	~15% of total SF	~25% of total SF
Age	Prior to 1960s	1970s to mid-1980s	2000+	2000+
Number of Floors	8	22	11	34
Average Floor Area Ratio (FAR)	6.7	9.4	6.8	24.4
Average Floorplate	17,000 SF	18,000 SF	25,500 SF	22,000 SF
Average Vacancy Rate	56%	43%	51%	43%
		<b>DOMINANT TYPOLOGY</b>		

### Office Typologies

Seattle’s office stock with at least 30% vacancy can be categorized into four primary typologies, as described below, based on attributes such as height, floor plate size, style and year built. These factors, along with other physical attributes such as building depth and window configuration, impact their potential for conversion to traditional, market-rate residential products.

Four typologies of properties experiencing 30%+ vacancy downtown:

**Type 1:** Mid-rise heritage buildings constructed prior to the 1960s with an average floorplate size of 17,000 SF. These buildings represent less than 20% of the selected inventory.

**Type 2:** Mid-density high rise (~20 floors) built in the 1970s through the mid-1980s. These properties have similar average floorplates and represent 40% of the selected office inventory. **Type 2 was selected as the prototype for testing possible conversion feasibility.**

**Type 3:** Mid-rise office buildings under 15 floors built since the 2000s. The average floorplate of these properties is largest among typologies at 25,000 SF, and they represent 15% of the selected office inventory.

**Type 4:** The largest and newest buildings in downtown Seattle: High-rise buildings 30-40 stories and above built since the 2000s. These buildings have an average floorplate of 22,000 SF and comprise about a quarter of the total office inventory.

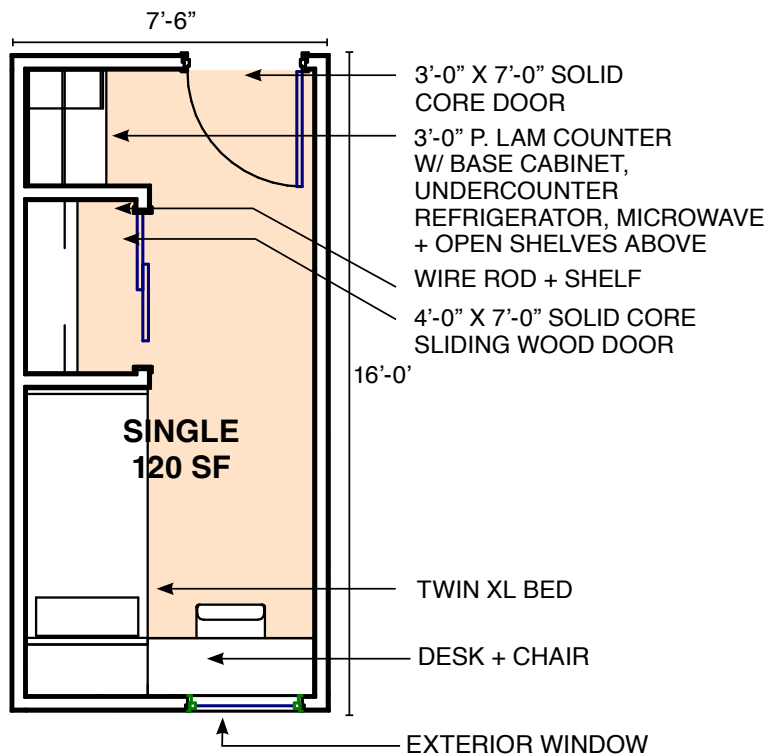
# Flexible Co-Living: Defining the Product

## Program and Unit Module

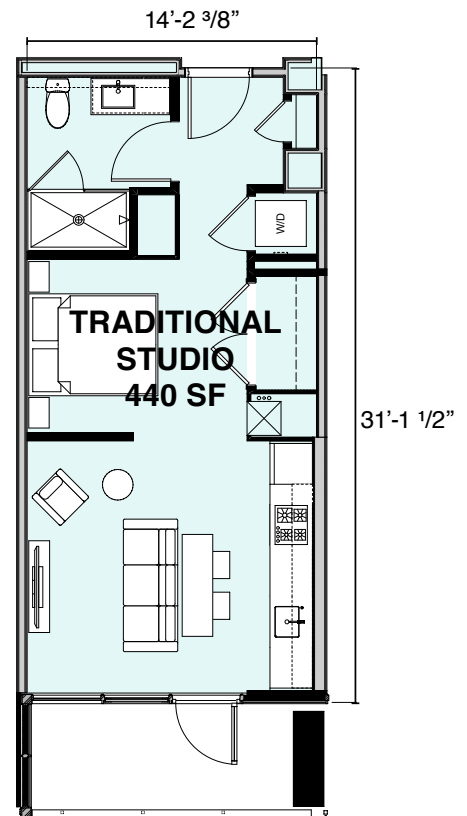
A program and unit module were developed to align with the project's goals and conform to the city of Seattle's building code.

A typical single-occupant sleeping room consists of a 120 SF private room. In-room furnishings would include a twin XL bed, desk and chair, and nightstand along with a microwave and standard-depth half-sized refrigerator to store personal food and beverage items. A storage shelf and cabinet can be used to store personal belongings. Each sleeping room is secured via a solid core wood door that can be locked by its occupant. Demising walls between sleeping rooms are designed with specifications to ensure the appropriate sound insulation.

A traditional studio layout of approximately 440 SF is shown as a point of comparison, which includes a full kitchen and bathroom in-unit.



Unit Module



Traditional Studio Layout

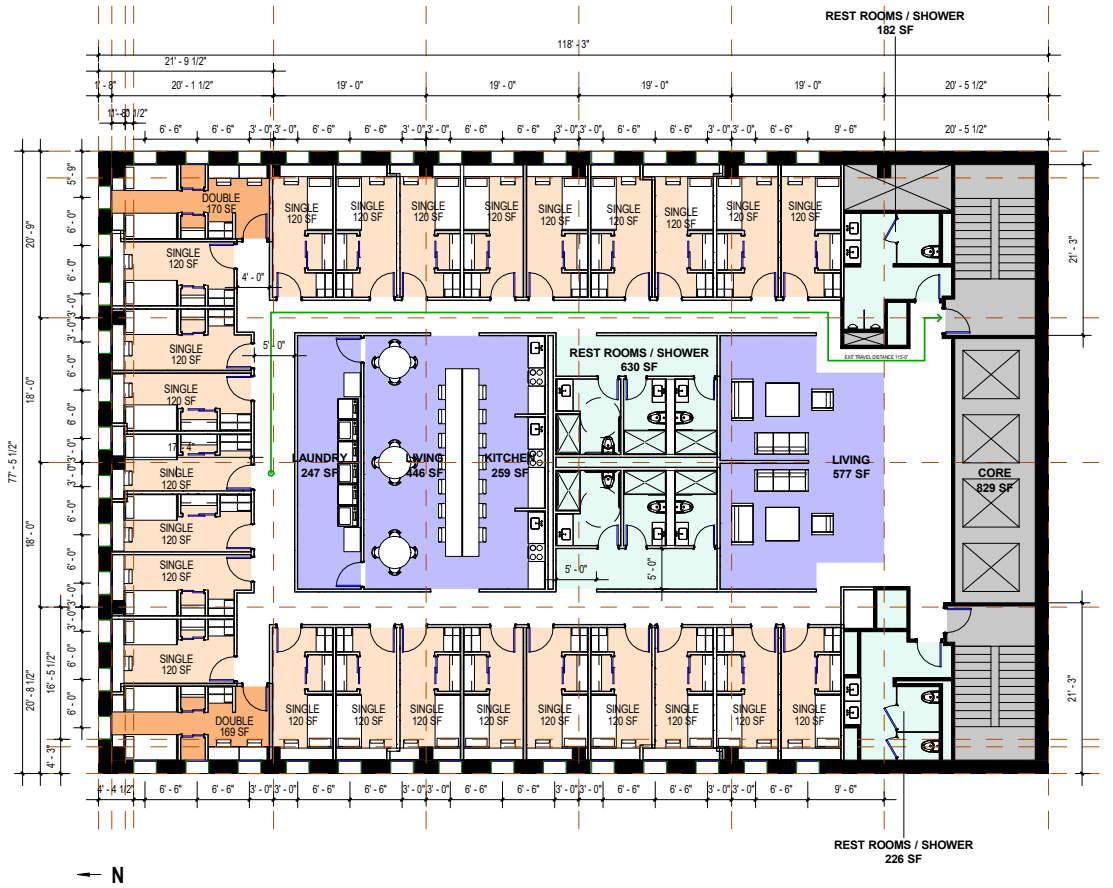
# Test Fits and Yields

## Shared Facilities and Amenity Spaces

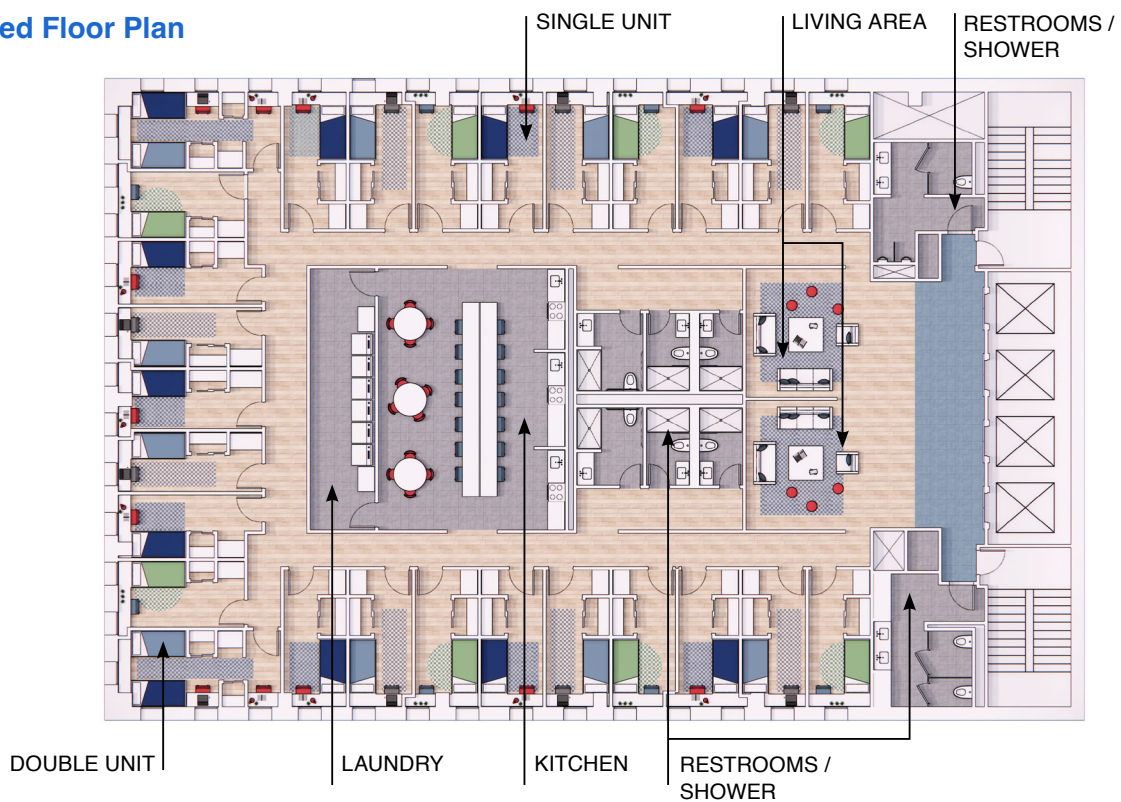
The following shared facilities are provided on each residential floor. The quantities of specific fixtures are driven by required ratios per occupant as defined by building code:

- **Kitchens:** Three shared kitchen areas are included on each floor. The kitchen area includes standard fixtures and appliances including a sink, electric range/oven, range hood, and microwave. In lieu of a refrigerator in the kitchen area, tenants have access to their individual half-sized refrigerator located in their dwelling unit. The kitchen area also includes an eat-in facility with a central dining table and several additional tables and chairs.
- **Living Room:** There are two shared living areas per floor, accommodating a variety of seating areas including couches and tables.
- **Bathrooms:** Bathroom facilities are shared in the interior of the floor. In the interior, there are six single-occupant restrooms each with a toilet, sink, and shower. In addition, there are three additional toilet rooms near the core of the building that utilize the existing plumbing stack, for a total of nine toilets and six showers per floor.
- **Laundry:** One laundry room per floor accommodates three washers and three dryers.

Typical Floor Test Fit



Rendered Floor Plan



### Yields per Floor

The prototypical building studied has a gross floor area of 9,160 SF. Each floor can accommodate 29 beds across 25 single units and 2 double units, for a total residential area of 3,340 SF per floor. 2,567 SF per floor is dedicated to the interior amenity spaces, including bathrooms, kitchens, and living areas.

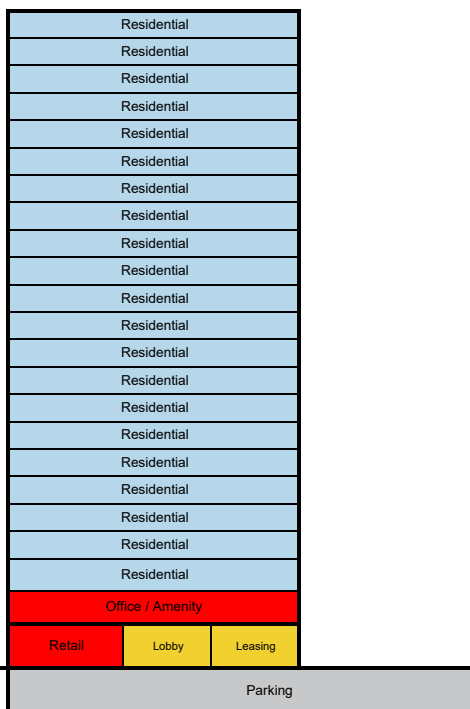
This yield produces a residential efficiency ratio of 64.5%. The remaining gross floor area is comprised of the building’s core and interior circulation.

The ratios of shared facilities/fixtures per occupant conform with Seattle’s building code regulations.

### Building Summary

The prototypical building studied is 23 floors. The ground floor would consist of a main lobby, a management office, and approximately 5,545 SF of retail space. The second floor contains approximately 5,000 SF of Class B office space plus building-level shared amenities including a fitness center. Parking for 218 cars and 250 bikes is included in the basement level. Floors 3-23 are dedicated for residential use, and each floor would have an identical layout.

Assuming 21 residential floors and 29 beds per floor, the building can yield a total occupancy of 609 occupants, or 567 units.



STATISTICS	
Residential Area	3,340 SF per floor
Interior Amenity	2,567 SF per floor
Gross Floor Area	9,160 SF per floor
Efficiency	64.5%
Occupants	29 (2 double units, 25 single units)
	315 GSF per occupant
Toilets	9 (3.2 occupants per fixture)
Showers	6 (4.8 occupants per fixture)
Sinks	13 (2.2 occupants per fixture)
Kitchens	3 (9.6 occupants per fixture)
Washer/Dryers	3 (9.6 occupants per fixture)

## Building Summary

	Levels	Floor to Floor	OA Height	Units	Parking Spaces	Bikes	Bike Room	Storage	B.O.H Services/ Mech	Common Area	Leasing/ Lobby	Interior Amenity	Retail / Office	Net Rentable Unit Area per Floor	Gross SF per Floor	EFF / Flr	Avg Unit Size
			235.00						SF	SF	SF	SF		SF	SF		SF
Residential	23	11.00	235.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	22	11.00	224.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	21	11.00	213.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	20	11.00	202.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	19	11.00	191.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	18	11.00	180.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	17	11.00	169.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	16	11.00	158.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	15	11.00	147.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	14	11.00	136.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	13	11.00	125.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	12	11.00	114.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	11	11.00	103.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	10	11.00	92.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	9	11.00	81.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	8	11.00	70.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	7	11.00	59.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	6	11.00	48.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	5	11.00	37.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	4	11.00	26.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Residential	3	11.00	26.00	27				0	829	2,424		2,567		3,340	9,160	64.5%	124
Amenity Floor	2	11.00	15.00	0					829	831		2,500	5,000		9,160		
Ground Floor	1	15.00	0.00	0	0				1,000	1,000	1,615		5,545		9,160		
Basement Parking	B	11.00			218	250	2,500										
	Floors			Units	Parking Spaces	Bikes	Bike Room	Storage	B.O.H Services/ Mech	Common Area	Leasing/ Lobby	Interior Amenity	Commercial	Net Rentable Unit Area	GSF		Avg Unit Size
Totals	23		235	567	218	250	2,500	0	19,238	52,735	1,615	56,407	10,545	70,140	210,680		124

# Meeting the Market: Rents and Users

## Quantifying the Market for Flexible Co-Living

Initial market research suggests that there is a sizable potential market for the flexible co-living concept. According to data from the American Community Survey, within the city of Seattle, 56% of the city's 367,000 households are renters. Of these 207,000 households, 58% are single-occupant, and only 5% are comprised of four people or more.

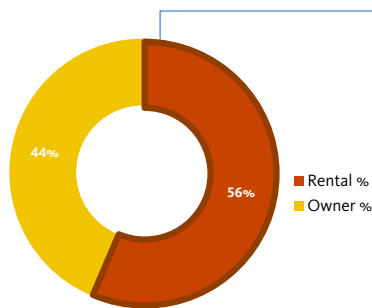
The household incomes of Seattle's single-person renter households are heavily skewed towards higher earners, but there is still a significant population of relatively moderate-income households. Approximately 16% or 19,000 single-occupant households earn between \$30,000 and \$50,000 per year.

25% of Seattle-area renters are considered severely cost-burdened, meaning they pay more than 50% of their income for rent. 49% of all Seattle-area renters spend more than 30% of income on rent.<sup>1</sup>

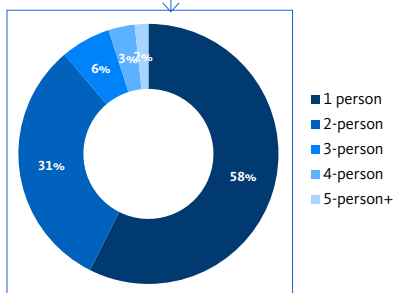
The quantity of single-household renters earning less than \$50,000 per year, or approximately 50% of the Area Median Income (AMI), suggests a sizable market for the flexible co-living typology. The single-occupant model offers a more affordable but market-rate product that aligns with renters' incomes and housing budgets.

**There are 207,000 renter households in the city of Seattle and 58% (119,000) of them are Single-Occupant**

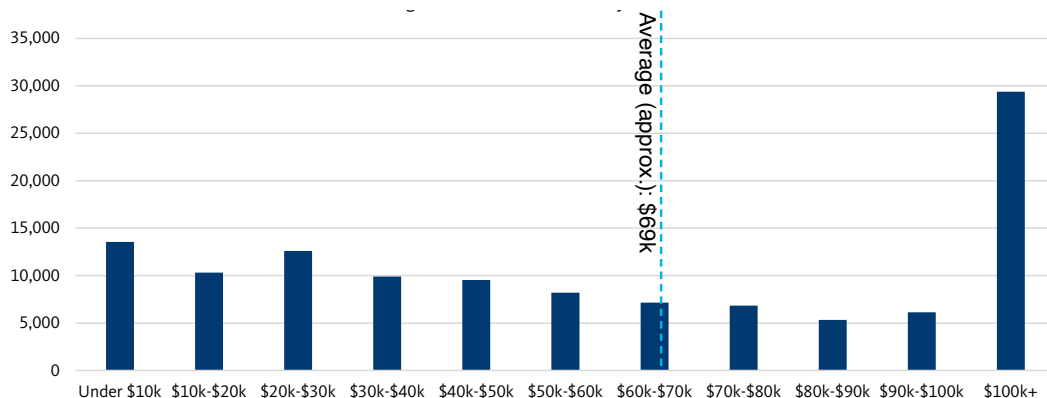
Household Tenure



Renters by Household Size



Single-Person Renters by Household Income



<sup>1</sup> The State of the Nation's Housing, Harvard Joint Center on Housing Studies [https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard\\_JCHS\\_State\\_Nations\\_Housing\\_2022.pdf](https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_State_Nations_Housing_2022.pdf)

Source: American Community Survey Public Use Microdata Sample (PUMS) 2022 1-Year Estimates. Selected Public Use Microdata Area (PUMA) geographies: Seattle City (West Seattle-Industrial) PUMA; Seattle City (Southeast) PUMA; Seattle City (Central) PUMA; Seattle City (Lake Union-Downtown) PUMA; Seattle City (Northwest) PUMA; Seattle City (Northeast) PUMA; Seattle City (North) PUMA;



### Potential Rents

Based on the distribution of single-person renter households in Seattle, there are approximately 19,000 individuals who earn between \$30,000 and \$50,000 per year.

HUD standards define a monthly housing budget as 30% of monthly income. Within this income bracket, households have a supportable housing budget of \$750 to \$1,250 per month. A \$750 to \$1,250 monthly housing budget would correspond to approximately 30-50% of local Area Median Income (AMI) levels for single-person households.

The median monthly rent for a market-rate unit in the city of Seattle is currently \$2,031. As such, the housing budgets of this segment are far lower than the rents of most existing and available product within the city.

Developing the flexible co-living product at rents between \$750 and \$1,250 per bed per month would meet the target resident’s housing budget in the market and provide an affordable option as compared to other available housing, delivering new supply at a significant discount to other market-rate offerings.

HH Income	Count	HH Income		Monthly Housing Budget (30%)		AMI (Average)
		Low	High	Low	High	
Under \$10k	13,560	\$0	\$9,999	\$0	\$250	<20% AMI
\$10k-\$20k	10,320	\$10,000	\$19,999	\$250	\$500	<20% AMI
\$20k-\$30k	12,600	\$20,000	\$29,999	\$500	\$750	~20-30% AMI
<b>\$30k-\$40k</b>	<b>9,900</b>	<b>\$30,000</b>	<b>\$39,999</b>	<b>\$750</b>	<b>\$1,000</b>	<b>~30-40% AMI</b>
<b>\$40k-\$50k</b>	<b>9,540</b>	<b>\$40,000</b>	<b>\$49,999</b>	<b>\$1,000</b>	<b>\$1,250</b>	<b>~40-50% AMI</b>
\$50k-\$60k	8,200	\$50,000	\$59,999	\$1,250	\$1,500	~50-60% AMI
\$60k-\$70k	7,150	\$60,000	\$69,999	\$1,500	\$1,750	~60-70% AMI
\$70k-\$80k	6,830	\$70,000	\$79,999	\$1,750	\$2,000	~70-80% AMI
\$80k-\$90k	5,340	\$80,000	\$89,999	\$2,000	\$2,250	~80-90% AMI
\$90k-\$100k	6,140	\$90,000	\$99,999	\$2,250	\$2,500	~95-100% AMI
\$100k+	29,370	\$100,000	\$1,000,000	\$2,500	\$25,000	100%+ AMI

\$750-\$1,250  
Target Per Bed Rent  
Range

Source: American Community Survey Public Use Microdata Sample (PUMS) 2022 1-Year Estimates. Selected Public Use Microdata Area (PUMA) geographies: Seattle City (West Seattle-Industrial) PUMA; Seattle City (Southeast) PUMA; Seattle City (Central) PUMA; Seattle City (Lake Union-Downtown) PUMA; Seattle City (Northwest) PUMA; Seattle City (Northeast) PUMA; Seattle City (North) PUMA;

# Operating Model and Financial Feasibility

Baseline project assumptions include industry standard and local market benchmarks to evaluate the feasibility of the project without additional subsidy. The following pages identify various levers that a developer could utilize in order to arrive at marketable returns for levered and unlevered internal rates of return (IRR).

For this project, rents for singles are assumed at \$1,000 per month, which would be affordable for a single-person household earning 41% of AMI. Double

units are rented at \$700 per bed per month, which would be affordable for a single-person household earning 31% of AMI.

The HUD voucher available to pay for units like these allows rents in Seattle of approximately \$1,500 in the current fiscal year, well above projected rents for this building. For comparison, a typical studio apartment in downtown Seattle rents for approximately \$1,530 per month as of August 2024.

## PROJECT OPERATING ASSUMPTIONS

Rent/Bed	Per Month per Person	Annualized
Singles	\$1,000	\$12,000
Doubles	\$700	\$8,400
<b>Avg Weighted Rent</b>	<b>\$959</b>	<b>\$11,503</b>
<b>Vacancy/Rent Loss</b>		<b>10%</b>
<b>Total Operating Expenses (OpEx) / SF</b>		<b>\$17.50</b>
Management Fee (%EGI)		2.5%
OpEx Ratio (as a % of total revenue)		38%
<b>Capital Reserves/Unit</b>		<b>\$400</b>
<b>Rent Escalation</b>		3%
<b>OpEx Escalation</b>		3%

## PROJECT PROGRAM

Units Per Floor	27	Beds/ Floor	29
Singles	25	93% Singles	25
Doubles	2	7% Doubles	4
<b>Total Units</b>	<b>567</b>	<b>Total Beds</b>	<b>609</b>

## OTHER INCOME

Parking Spaces	218 spaces	\$75/month
Bike Spaces	250 spaces	\$10/month
Office SF	5,000 SF	\$30/SF
Retail SF	5,545 SF	\$30/SF

**OPERATING ASSUMPTIONS**

**Rent & Vacancy**

Monthly rents of \$1,000 per month per person for standard singles and \$700 per month per person for doubles align with the target market’s housing budget and AMI levels of 30-50%. 3% annual rent and operating expense escalation rates align with market benchmarks for this type of product.

Other revenues include \$75/month for car parking, \$10/month for bike parking, plus net office rent of \$30/SF and retail rent of \$30/SF to align with market benchmarks.

A 10% average vacancy rate exceeds the average market-rate vacancy rate in Seattle, reflecting a risk premium and is in line with typical vacancy rates for similar concepts elsewhere.

**Operating Expenses**

A total annual operating expense cost of \$17.50/ SF is based on industry benchmarks for multi-family buildings in this market and includes utilities, repairs, maintenance, management, and insurance. This includes a higher insurance cost to account for higher anticipated insurance premiums associated with the product. Operating expenses as a percentage of total revenue average 38%, higher than typical multi-family benchmarks but reflective of higher operating costs associated with the product.

No real estate taxes have been included at this time.

**Capital Reserves**

Annual capital reserves of \$400 per bed are included to account for capital improvements and necessary unit refresh upon resident move-outs.

**DEVELOPMENT COST ASSUMPTIONS**

**Construction Costs**

Turner Construction Company was engaged to develop construction cost estimates for the prototypical building and test fit studied. The key variables in estimating construction costs are the quality of the building’s existing mechanical, electrical, and plumbing (MEP) systems and the degree of anticipated interior demolition. These are heavily dependent on individual building conditions.

Turner developed a high and low cost range for two existing building conditions. The high range Option 1 assumes selective demolition of all floors and full replacement of HVAC and electrical systems. Option 2 assumes the reuse of existing HVAC and electrical systems plus the reuse of 50% of the existing shell space. In practice, developers are more likely to seek out and prioritize buildings for conversion that have the most intact systems to minimize MEP costs. Thus, **\$279/GSF in hard costs**, within the Option 2 range, is used for modeling purposes. Additional due diligence on a per-building basis would be required to refine cost estimates further.

<b>CONSTRUCTION COST ESTIMATES</b>	<b>OPTION 1</b>	<b>OPTION 2</b>
<i>Selective Demolition</i>	<i>Demo at all floors</i>	<i>50% of existing shell maintained</i>
<i>Hazardous Materials Abatement</i>	<i>Includes abatement allowance</i>	<i>Abatement not required</i>
<i>Fire Protection</i>	<i>Existing systems reused</i>	<i>Existing systems reused</i>
<i>Plumbing</i>	<i>Existing service/stacks reused</i>	<i>Existing service/stacks reused</i>
<i>HVAC</i>	<i>New systems required</i>	<i>Existing systems reused</i>
<i>Electrical</i>	<i>New systems required</i>	<i>Existing systems reused</i>
<b>Construction Cost Estimate</b>	<b>\$329/GSF</b>	<b>\$279/GSF</b>
<i>Low-High Estimate</i>	<i>\$312 - \$362/GSF</i>	<i>\$265 - \$307/GSF</i>

In addition to base construction costs, Seattle's substantial alterations code requirements and seismic risks require that all office-to-residential conversions undergo seismic retrofits to outfit a building for residential use, since residential buildings have stricter seismic requirements than office buildings. Turner developed a **seismic retrofit estimate of \$70/GSF** based on the costs associated with typical steel buildings in Seattle. Combined, total construction costs are estimated at **\$349/GSF**.

An industry-standard soft cost estimate of 15% of hard costs is included to account for architectural, engineering, permitting, and legal fees. A 5% contingency on hard & soft costs was also added per standard practice. \$5,000 per bed in furnishings, finishes, and equipment (FF&E) is also included.

### Acquisition Costs

Due to the unknown dynamics of a potential development scenario, additional due diligence will be required on a per-building basis to identify a reasonable acquisition cost. Variables that would likely impact property value at the time of purchase include operating income, market cap rates, building condition, and available sales comps.

In addition to property value, there are multiple likely development scenarios for this product typology.

These include, but are not limited to: The existing property owner self-develops the conversion; the existing property owner contributes the land as collateral in a joint-venture development; a foreclosed or bank-owned property is purchased by a developer at a discounted purchase price; a potential land swap between property owners; or a standard purchase at market value.

The development pro forma includes a purchase price/acquisition cost of **\$75/GSF or \$16 million**.

### Financing Assumptions

The project assumes traditional debt and equity and no public financing or other forms of assistance. Industry benchmark loan assumptions of 65% loan-to-value (LTV) and a 30-year amortization are used for permanent financing. The remaining 35% of project costs is expected to be sourced through equity.

Interest rates are assumed at 6.0% for permanent financing and 10% for the construction period. An exit cap rate of 5.75% is assumed during reversion in year 10 with a 3.0% sale commission.

DEVELOPMENT COSTS	TOTAL	PER GSF	PER BED	PER UNIT
Land/Building Purchase	\$15.80M	\$75		
Construction (Hard) Costs	\$73.53M	\$349	\$120,700	\$129,700
Soft Costs (15%)	\$11.03M	\$52		
Contingency (5%)	\$4.23M	\$20		
FF&E <sup>1</sup>	\$3.05M	\$14	\$5,000	
<b>Total Project Costs</b>	<b>\$107.63M</b>	<b>\$511</b>	<b>\$176,700</b>	<b>\$189,800</b>

### PROJECT FINANCING ASSUMPTIONS

Debt Loan-to-Value (LTV)	65%
Equity	35%
Permanent Loan	6.0%
Construction Period Loan	10.0%
Permanent Loan Period	30-Years
Exit Cap Rate	5.75%
Terminal Sale Commissions	3.0%

5-YEAR CASH FLOW (\$ millions)	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Rental Income <sup>2</sup>		7.22	7.43	7.66	7.88	8.12
Vacancy Loss		-2.89	-0.74	-0.77	-0.79	-0.81
Other Income <sup>3</sup>		0.56	0.59	0.65	0.73	0.85
Effective Gross Revenue		4.89	7.28	7.54	7.83	8.15
Operating Expense		-2.67	-2.80	-2.89	-2.98	-3.08
Capital Reserves		0.00	-0.24	-0.25	-0.26	-0.26
<b>NOI</b>		<b>2.22</b>	<b>4.24</b>	<b>4.40</b>	<b>4.59</b>	<b>4.81</b>
<b>Total Before Tax Cash Flow</b>	<b>-115.22</b>	<b>2.22</b>	<b>4.24</b>	<b>4.40</b>	<b>4.59</b>	<b>4.81</b>
Terminal Value (Yr 10), Net Cost of Sale	139.61					
<b>Unlevered IRR</b>	<b>5.8%</b>					
<b>Levered IRR</b>	<b>7.4%</b>					
<b>Equity multiple - Exit year</b>	<b>2.21</b>					

<sup>1</sup> Furnishings, Finishes, and Equipment

<sup>2</sup> Average weighted rent of \$11,503 per bed times 609 beds; at a 3% annual escalation

<sup>3</sup> Assumes a 2-year stabilization/lease-up period and a stabilized occupancy of 90%

<sup>4</sup> Total annual retail rent, office rent, parking and bike parking monthly fees. 3% annual escalation.

<sup>5</sup> OpEx is calculated on GSF and includes common area maintenance, operations, insurance, and management fees. 3% annual escalation.

## Returns

The project's feasibility was evaluated by developing an operating pro forma and financial model, employing industry-standard methodologies and metrics.

Two key metrics for assessing project performance are the unlevered and levered Internal Rate of Return (IRR). IRR measures both the project's performance and profitability, indicating the expected return on initial capital investment. Property developers and investors use preferred benchmark thresholds for both unlevered and levered IRRs when evaluating a project's financial feasibility.

Unlevered IRR assesses general project feasibility and does not calculate the impact of project financing. Lending institutions typically review a project's unlevered IRR as part of the underwriting process.

Levered IRR measures an investor's return on their project contribution. Generally, projects with attractive levered IRRs can draw investors by generating sufficient Net Operating Income (NOI) to repay investments. Individual risk tolerances determine an investor's preferred levered IRR thresholds.

## Scenarios

The baseline scenario assumes conservative conditions, including market-rate, undiscounted acquisition costs, traditional market-rate financing, and no local public assistance. In reality, interested developers are likely to pursue a number of strategies to reduce development costs by leveraging programs and other subsidies available to them, often with public subsidy or other support.

The city of Seattle's commitment to support office-to-residential conversions through new legislation plus other state programs such as the Washington State sales tax break introduced through SB 6175, suggest that the success of alternative financing and project grants is perhaps more likely here than in other cities.

Public subsidies are typically available as grants or loans. Grants directly offset total development costs, reducing the project's overall cost. Grants effectively lower the required equity and debt, positively impacting both the levered and unlevered IRR.

Public subsidies can also be repayable loans with more favorable debt terms compared to traditional lending, such as a lower interest rate or a higher loan-to-value ratio (i.e. less investor equity is required). These terms can reduce the annual cost of debt service on the loan, primarily impacting levered IRR by leaving more residual cash flow for investor returns.

To test the impact of these conditions on the baseline scenario, three alternative scenarios were developed based on the relative availability and ease of applying for and securing the various potential forms of assistance. Scenario 1 assumes a relatively low effort, while Scenario 3 requires a high degree of coordination with multiple public entities, though still within the range of possibility.

**Scenario 1: No Acquisition Costs**

Alternative Scenario 1 assumes no acquisition costs. This can be achieved in cases where a building is vacant or underperforming to the point where it no longer provides any value in its current state and is acquired at essentially no net cost to the buyer. Alternatively, municipalities sometimes purchase underperforming properties and donate them to developer entities as a form of public assistance for redevelopment purposes.

**Scenario 2: No Acquisition Costs, Local Grant**

In addition to no acquisition costs, Scenario 2 assumes local assistance in the form of a grant equal to 5% of project construction costs.

**Scenario 3: No Acquisition Costs, Local Grant, Below-Market Financing, Historic Tax Credits**

Alternative Scenario 3 assumes no acquisition costs, the local grant, plus below-market financing in the form of a low-interest loan that could be offered to the project through one of several national or local programs. The below-market loan is assumed to offer a 40-year amortization, preferred interest rate of 4.75%, and 75% LTV. This is in comparison to the market-rate 30-year amortization, 6.0% interest rate, and 65% LTV used in the prior scenarios. This form of

assistance produces lower annual debt service costs and a higher net operating income.

Alternative Scenario 3 also assumes the use of Historic Tax Credits. Established in 1976, the federal Historic Tax Credit program provides tax incentives for historic building renovations. To qualify for Historic Tax Credits, a building must be a certified historic structure (typically at least 50 years of age or older) or listed as a contributing building in a historic district. Since the Historic Tax Credit typically could be applied to buildings that are 50 years old, or older, at the time of publication this would cover buildings built up to 1974.

The federal Historic Tax Credit program provides tax credits equal to up to 20% of qualified rehabilitation costs, with no maximum dollar limit. Qualified expenses include most hard and soft costs related to rehabilitation but does not include acquisition costs or interior furniture. Once awarded to a project, tax credits are sold to investors and the net proceeds function as a grant that reduces the overall development budget.<sup>1</sup>

38 states offer parallel State Historic Tax Credit programs that can be combined with Federal credits, but Washington is one of the 12 states that does not have a state program, so these calculations only include the federal tax credit.<sup>2</sup>

SUBSIDY/ INCENTIVE	TYPE OF FUNDING	SOURCE		UNLEVERED IRR IMPACT	LEVERED IRR IMPACT
No Acquisition Costs	Grant	Local	City could purchase a building and donate to developer at no cost	X	X
Local Grant	Grant	Local	City fund or local funding mechanism such as TIF (Tax Increment Financing)	X	X
Below-Market Financing	Loan	Local, State, or Federal	Low-interest rate loan offered through existing local, state, or federal program (e.g. HUD)		X
Historic Tax Credit - Federal	Grant	Federal	Grant equal to up to 20% of eligible rehabilitation costs for qualified buildings	X	X
Historic Tax Credit - State	Grant	State	38 states offer parallel State HTC program for qualified buildings; funding and eligibility varies by state	X	X

<sup>1</sup> IRS Rehabilitation Credit Overview: <https://www.irs.gov/businesses/small-businesses-self-employed/rehabilitation-credit>

<sup>2</sup> State Historic Tax Credit Resource Guide: [https://cdn.savingplaces.org/2023/03/31/15/02/36/841/NTHP\\_HTC\\_2023\\_StateGuide.pdf](https://cdn.savingplaces.org/2023/03/31/15/02/36/841/NTHP_HTC_2023_StateGuide.pdf)

<b>SCENARIO 0: \$75/SF Acquisition</b>		<b>SCENARIO 1: No Acquisition Costs</b>		<b>SCENARIO 2: No Acquisition Costs Subsidy Grant</b>		<b>SCENARIO 3: No Acquisition Costs Subsidy Grant 4.75% Debt/75% LTV</b>	
<b>RETURNS</b>		<b>RETURNS</b>		<b>RETURNS</b>		<b>RETURNS</b>	
Acquisition Cost	\$15.8M	Acquisition Cost	\$0	Acquisition Cost	\$0	Acquisition Cost	\$0
Subsidy/Equity	\$0	Subsidy/Equity	\$0	Subsidy/Equity	\$5.1M	Subsidy + HTC	\$17.3M
Total Project Costs Net of Subsidy	\$107.6M	Total Project Costs Net of Subsidy	\$91.8M	Total Project Costs Net of Subsidy	\$86.8M	Total Project Costs Net of Subsidy + HTC	\$74.55M
Debt	6.0%/30-year amort	Debt	6.0%/30-year amort	Debt	6.0%/30-year amort	Debt	4.75%/40-yr amort
Unlevered IRR	5.8%	Unlevered IRR	7.7%	Unlevered IRR	8.4%	Unlevered IRR	10.3%
Stabilized NOI	\$4.24M	Stabilized NOI	\$4.24M	Stabilized NOI	\$4.24M	Stabilized NOI	\$4.24M
Levered IRR	7.4%	Levered IRR	11.5%	Levered IRR	12.9%	Levered IRR	20.8%
Equity Multiple	2.21	Equity Multiple	2.88	Equity Multiple	3.15	Equity Multiple	5.04
Stabilized DCR	0.83	Stabilized DCR	0.98	Stabilized DCR	1.03	Stabilized DCR	1.35

### Findings and Implications

Under the different scenarios tested, the project produces an unlevered IRR between 5.8% and 10.3% and a levered IRR between 7.4% and 20.8%. These thresholds approach levels that may indicate feasibility but are highly dependent on individual investor and lender tolerances, portfolios, and preferences. The project may require an additional level of subsidy to attract necessary capital.

Regardless of the return metrics, the flexible co-living concept and model succeeds in its ability to deliver much-needed housing at a lower cost. It is estimated that this concept can deliver a dwelling unit with a baseline development cost of approximately \$190,000 per unit, while the current cost of developing a traditional studio unit in the city of Seattle may far surpass \$400,000 per unit.<sup>1</sup> If subsidy dollars could be dedicated to this concept, the units produced per dollar of public assistance can greatly exceed what is generated under existing housing delivery models since the cost per bed is less than one-half the cost of building a standard studio.

As housing affordability continues to erode and downtown office vacancy rates remain elevated, this concept can unlock additional office-to-residential conversion opportunities. Policymakers can consider supporting the implementation of office-to-flexible co-living conversions due to the outsized impact that the concept has on housing production in an area of critical need. If successful, cities will be able to deliver low-cost housing in a much more efficient and cost-effective manner, providing thousands of secure, modern, and attractive homes to our nation's downtowns.

<sup>1</sup> Gensler benchmark study of studio construction costs, September 2024



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