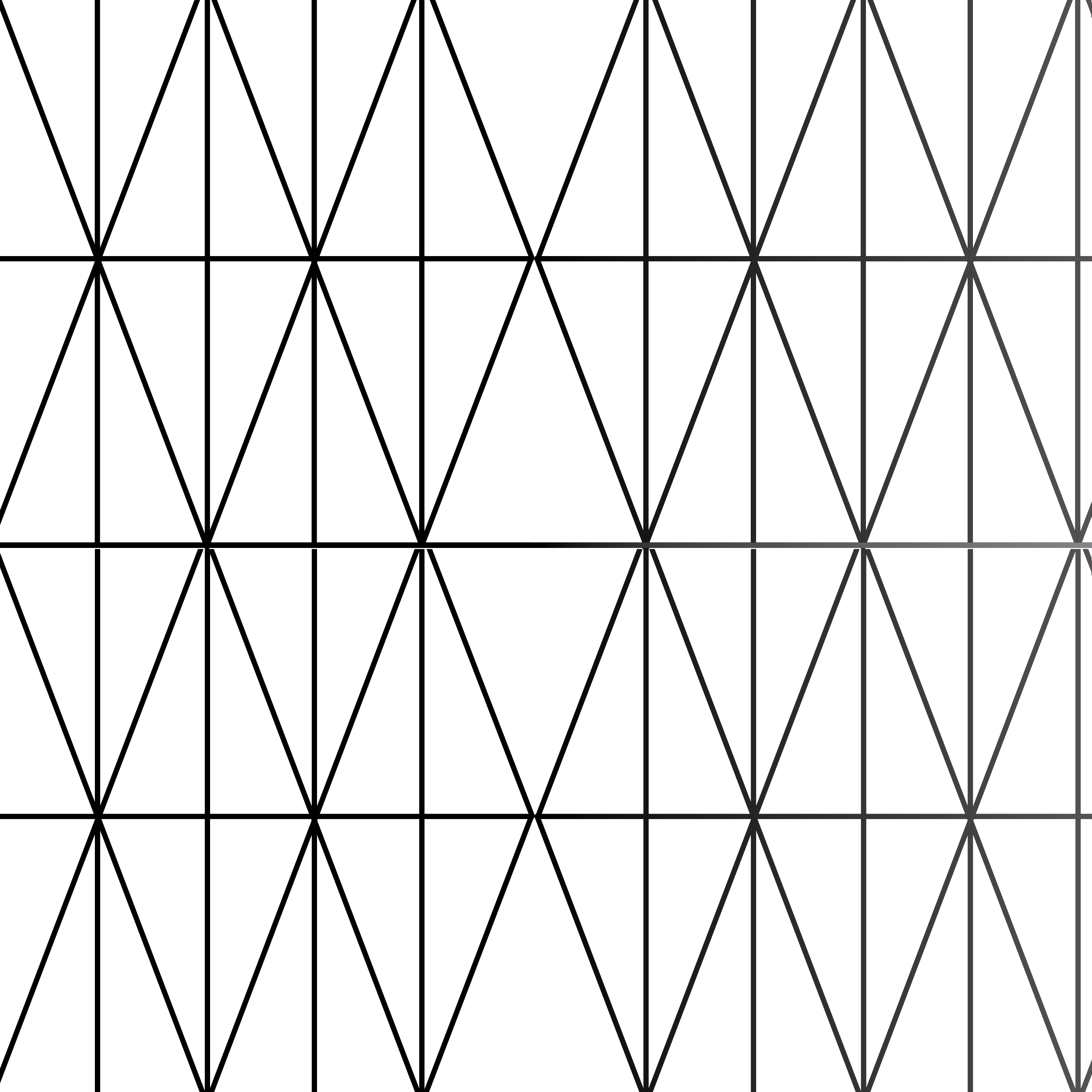


Transitional Living Community

a study of transformation





KATELYN MARKHAM

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Professor - Texas A&M Department of Architecture
Principal - BRW Architects

1 COMMUNITY **8**

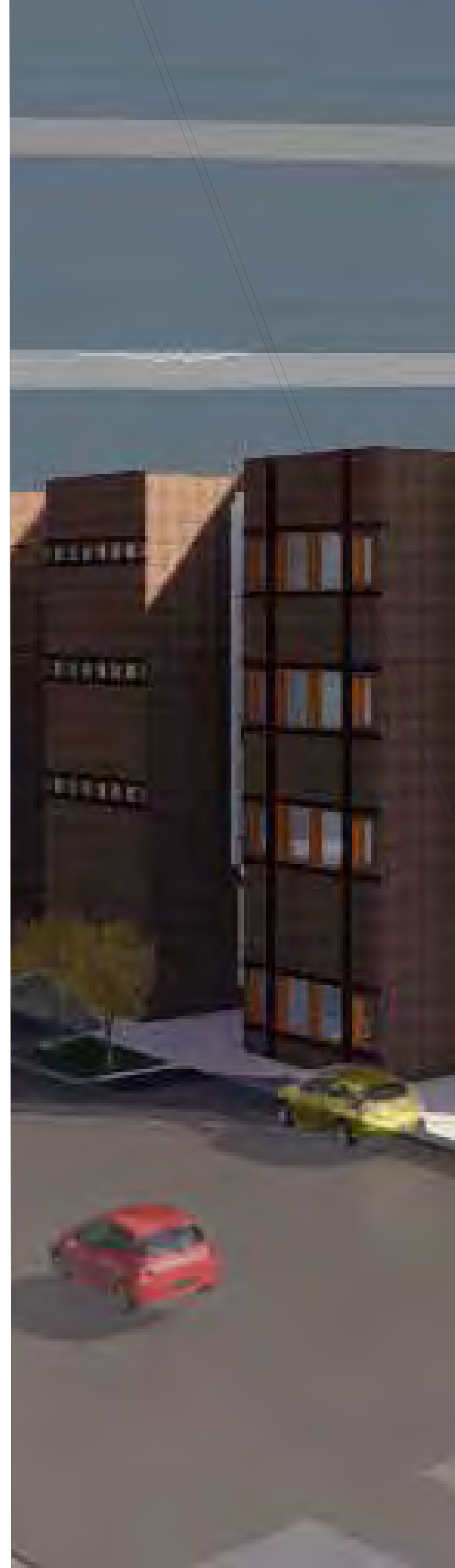
2 INDIVIDUAL **24**

3 FABRICATION **44**

STUDENT COMMUNITIES

PROJECT ABSTRACT

The model of removing and replacing slum areas with new infrastructure has widely proven to only relocate its current residents to an equal or lower standard of living by the product of property value increase. The goal of this mixed-use urban community model is to design a temporary living, learning, working community that allows 'quality of life' advancement for typically marginalized individuals and the city as a whole through Asset-Based Community Development. This objective is achieved by creating a self-funded amenity that provides services for both the homeless and low income population as well as business class individuals that work in the surrounding office towers and complexes that can conveniently eat, shop and invest in the community complex as well. **This project evaluates how to effectively achieve the transformation of the individual, the community, and the building fabrication itself in a mixed-use complex.**





This project breaks the stigma of homeless centers by creating an Asset Based Development that adds value and becomes an attraction, not an eyesore.

Cost of living and the major influence that economics plays on the homeless situation are evaluated in order to build a beneficial program.

The site is designed to act as a common grounds where connections, relationships, and growth flourish across diverse groups of people.

COMMUNITY





LOCAL ECONOMICS

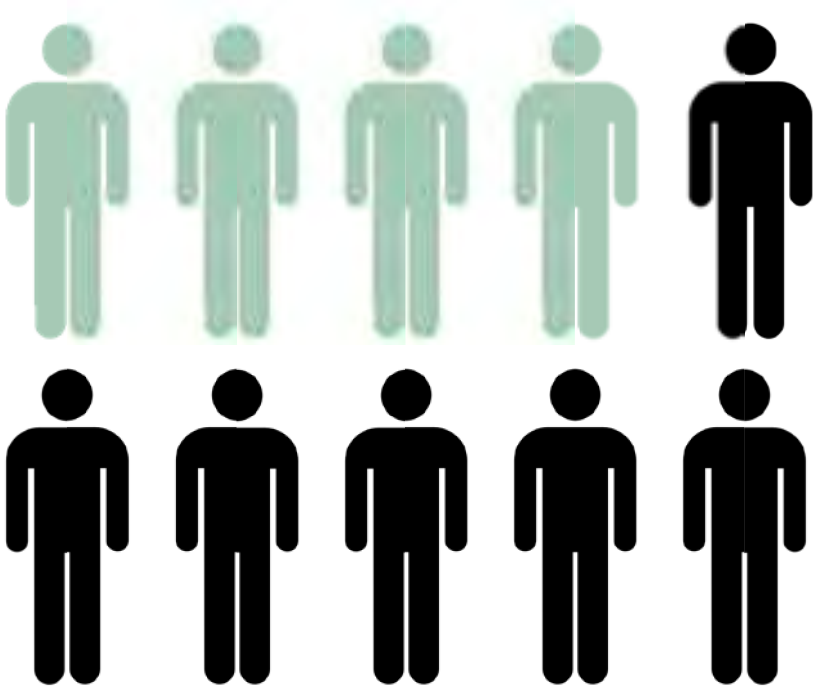
Dallas, Texas, the city in which the site is located, is officially the city with the highest population of homelessness in the state based on the 2019 Point-in-Time count. While this demographic of the population is often unseen and unheard, there is an impact that can be felt by the community as a whole. Annually over 10,000 people are homeless, and at a yearly Point-in-Time measurement 4,538 are homeless in Dallas on any given day. Turning a blind eye to the homeless problem perpetuates various other issues that are additionally taxed by having a homeless population. These precipitous areas are not limited to but include: healthcare resources, crime and safety, the workforce, and use of tax dollars. Causes of homelessness include: domestic violence, family issues, chronic health conditions, substance abuse, mental illness, PTSD, lack of affordable housing, and economic challenges. Economic challenges being the leading cause for 50% of those that are homeless. What many don't realize is that one third of Dallas residents live paycheck to paycheck even with a family household income of \$75,000 a year. This means that one third of the population could be one paycheck away from becoming homeless due to a long term illness or unforeseen setback.



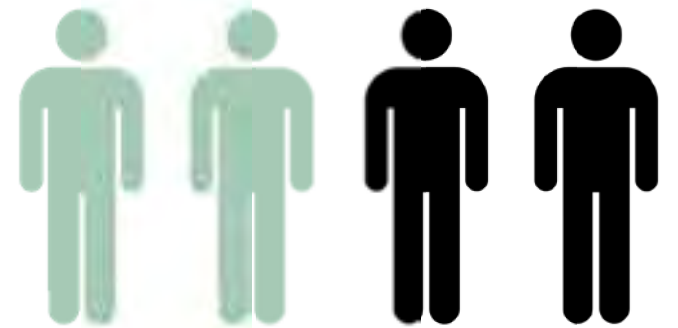
50% are homeless for economic reasons



Ratio of male to female: 3 to 4



Over 10,000 are homeless annually. 4,538 Point In Time measurement.



1,452 of 4,538 homeless are unsheltered on any given night



\$82 A DAY



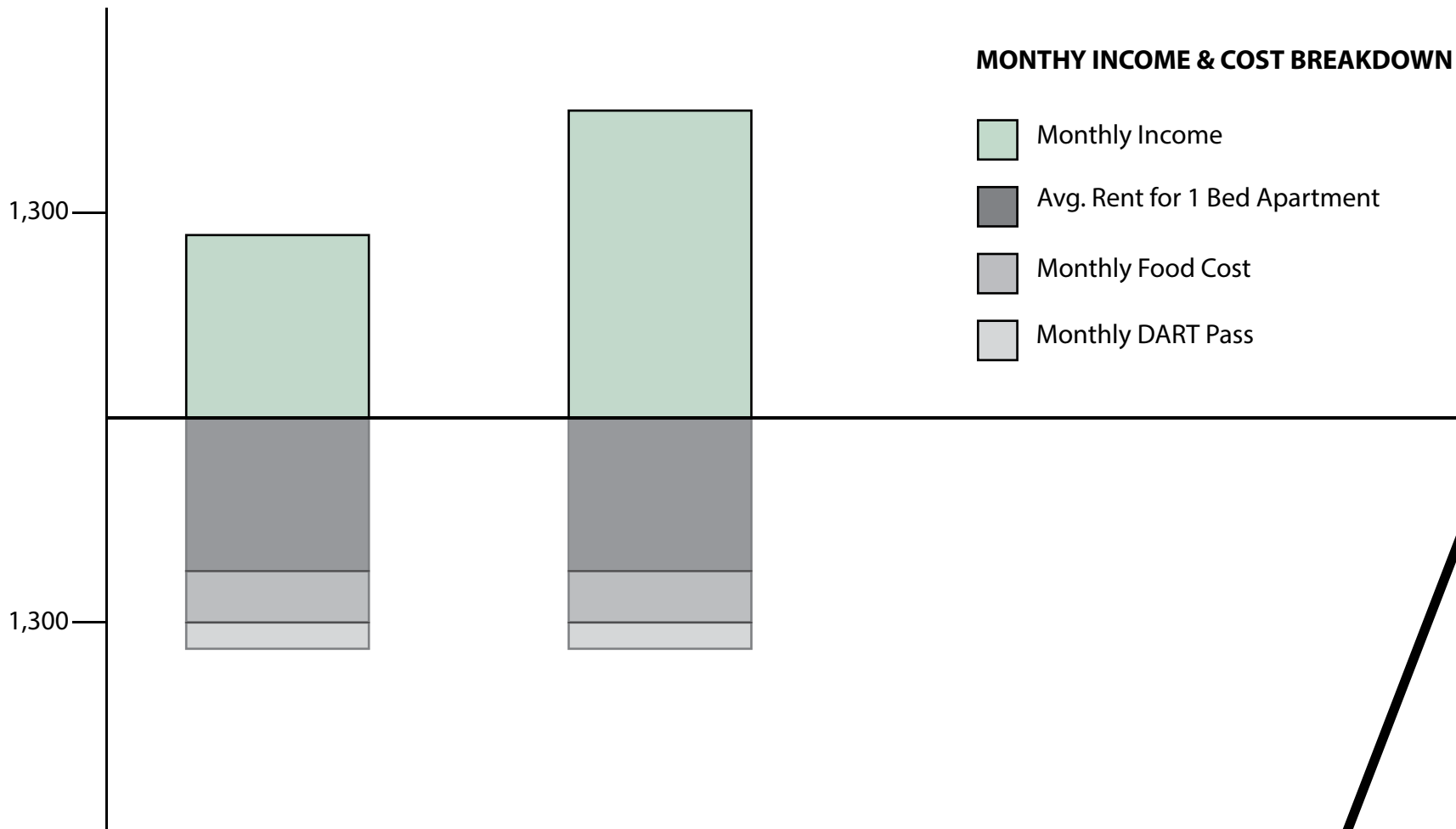
\$36.19 A DAY



\$19.40 A DAY

COST OF HOMELESSNESS

The cost of a homeless individual on a community is over \$40,000 a year as many homeless rotate through a cycle of hospital visits, prison stays and periods of time in shelters. As a comparison of prison, shelter and housing costs; housing is cheapest.

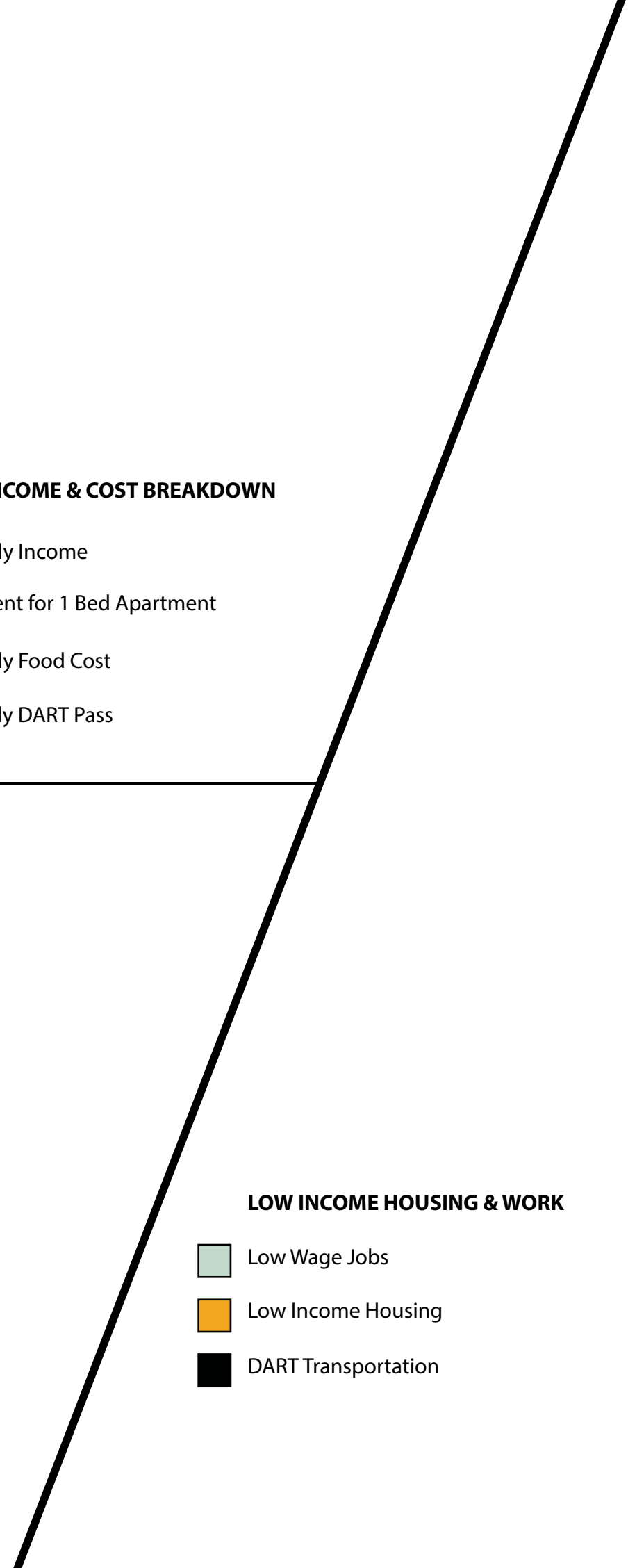


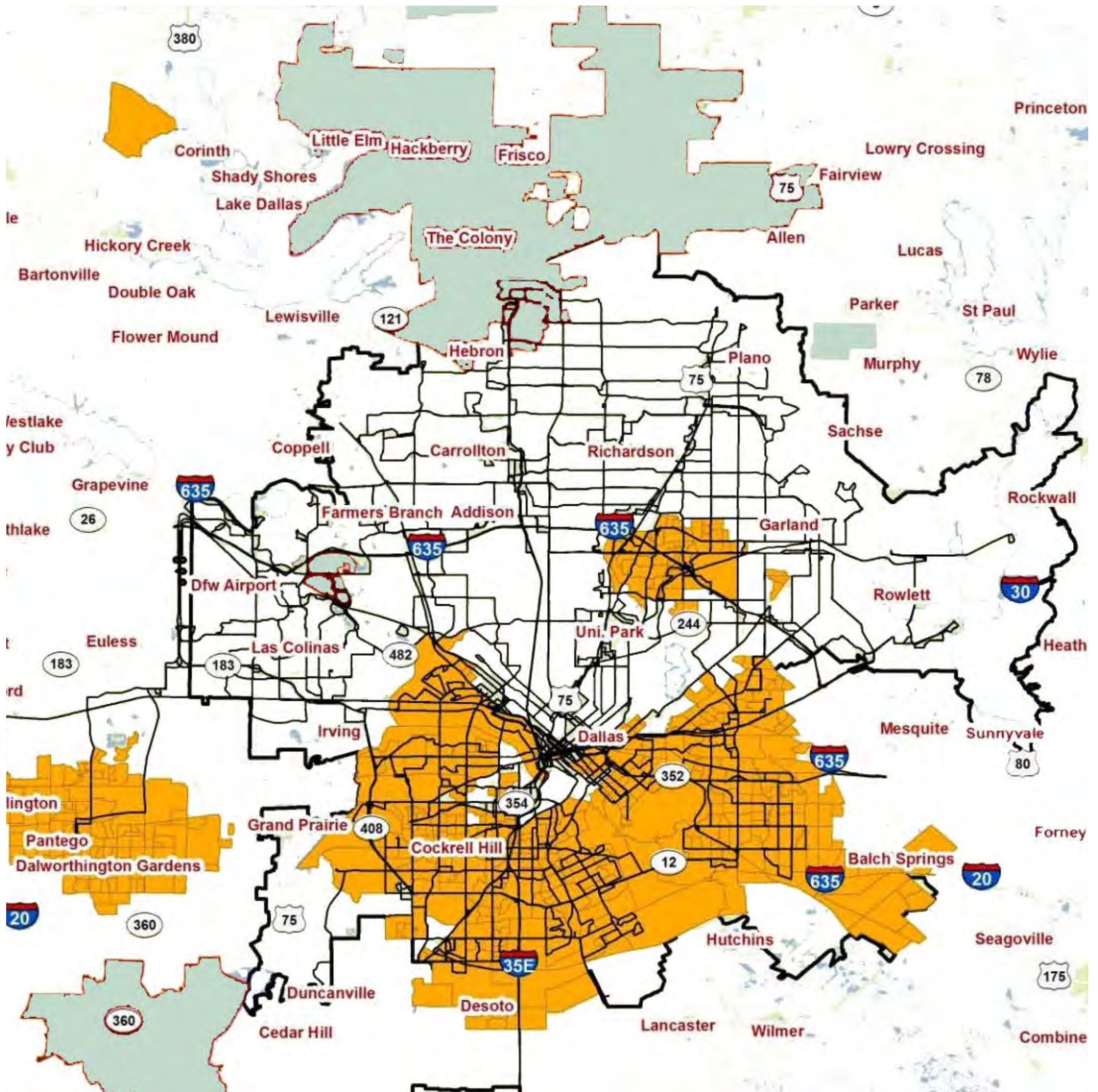
LOCAL ECONOMICS

Minimum wage is \$7.25 an hour while those with a basic certification earn on average \$15 an hour. The difference in monthly net income is \$1,232 versus 2,585.62. Average rent cost is \$998, food cost \$290 month, and a regional transportation pass for DART is \$196 a month. By gaining any minimal certification it allows individuals to have a more livable income. The map to the right shows the disparity between low Income housing and Low wage jobs.

LOW INCOME HOUSING & WORK

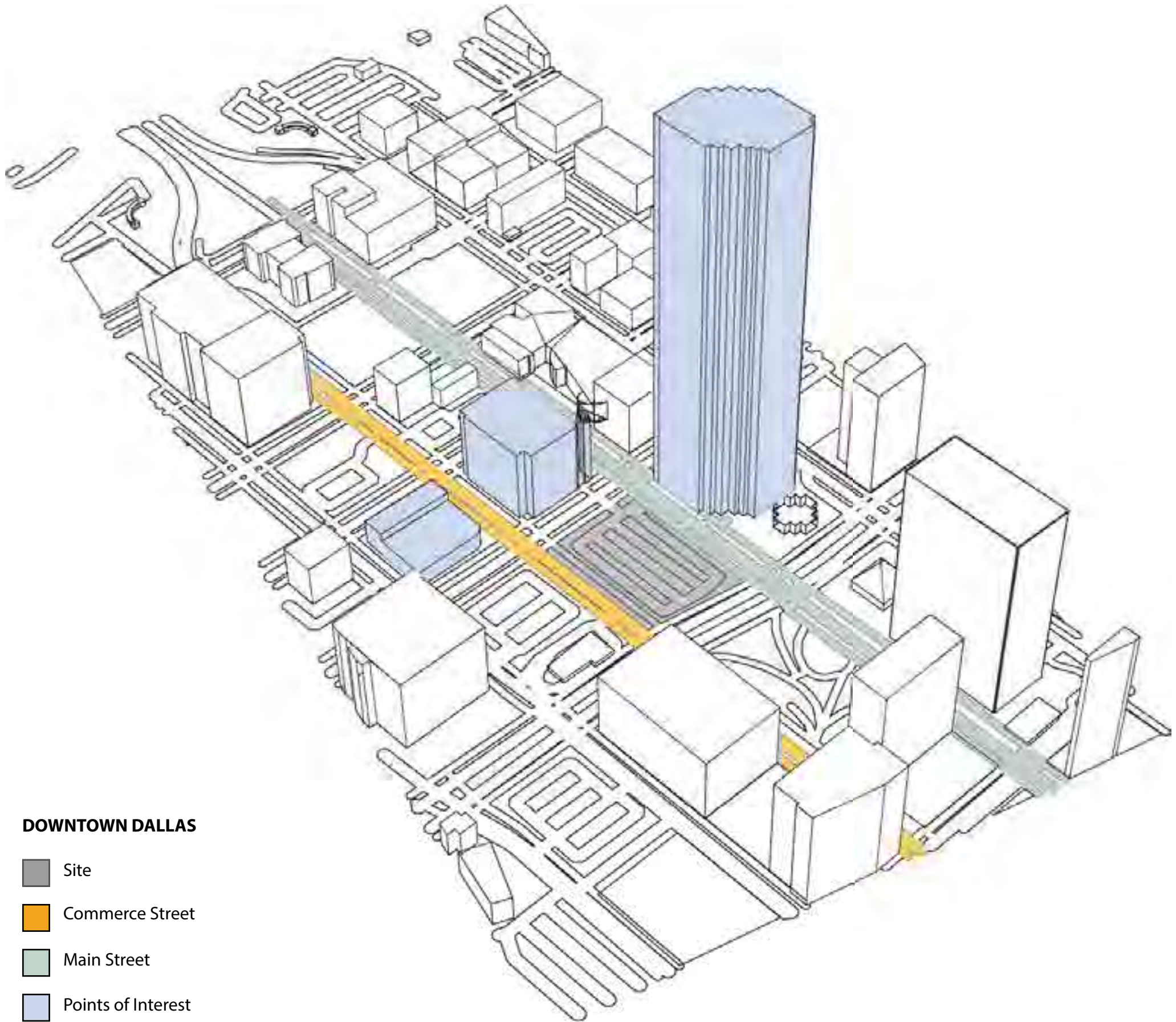
- Low Wage Jobs
- Low Income Housing
- DART Transportation

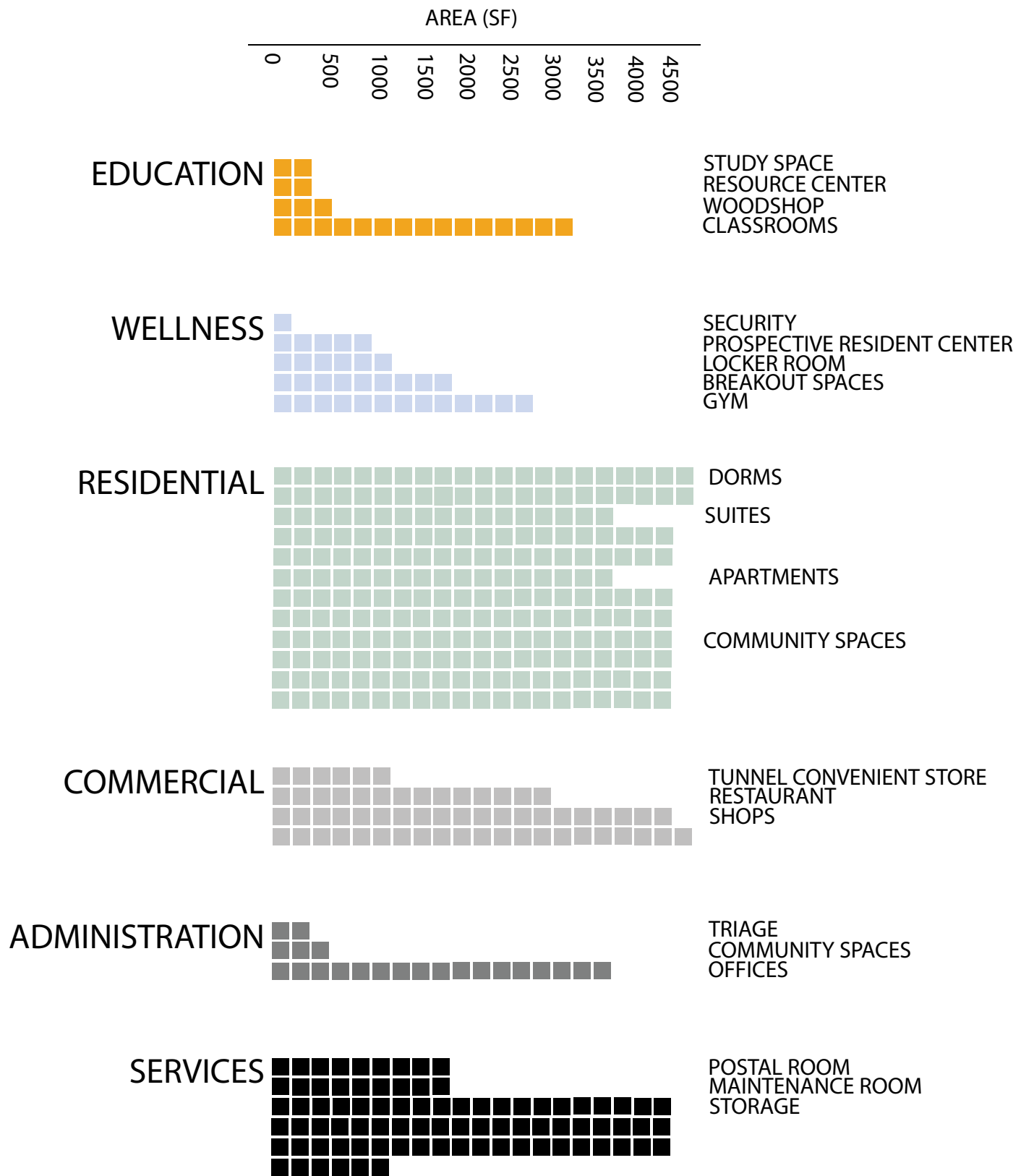




STREET DISPARITY

An accurate way to describe the status and situation in each of the streets that the site is sandwiched in between "a tale of two cities." While Main Street is a business class thoroughfare with office buildings, educational centers, restaurants and hotels, Commerce Street has a bus station, McDonald's, and is the street where many homeless wander along and congregate at. Having a site in this location creates many opportunities to engage both demographics together in one place.





EDUCATION
Job skill training, financial literacy and artisanal crafts such as woodmaking are taught on campus.

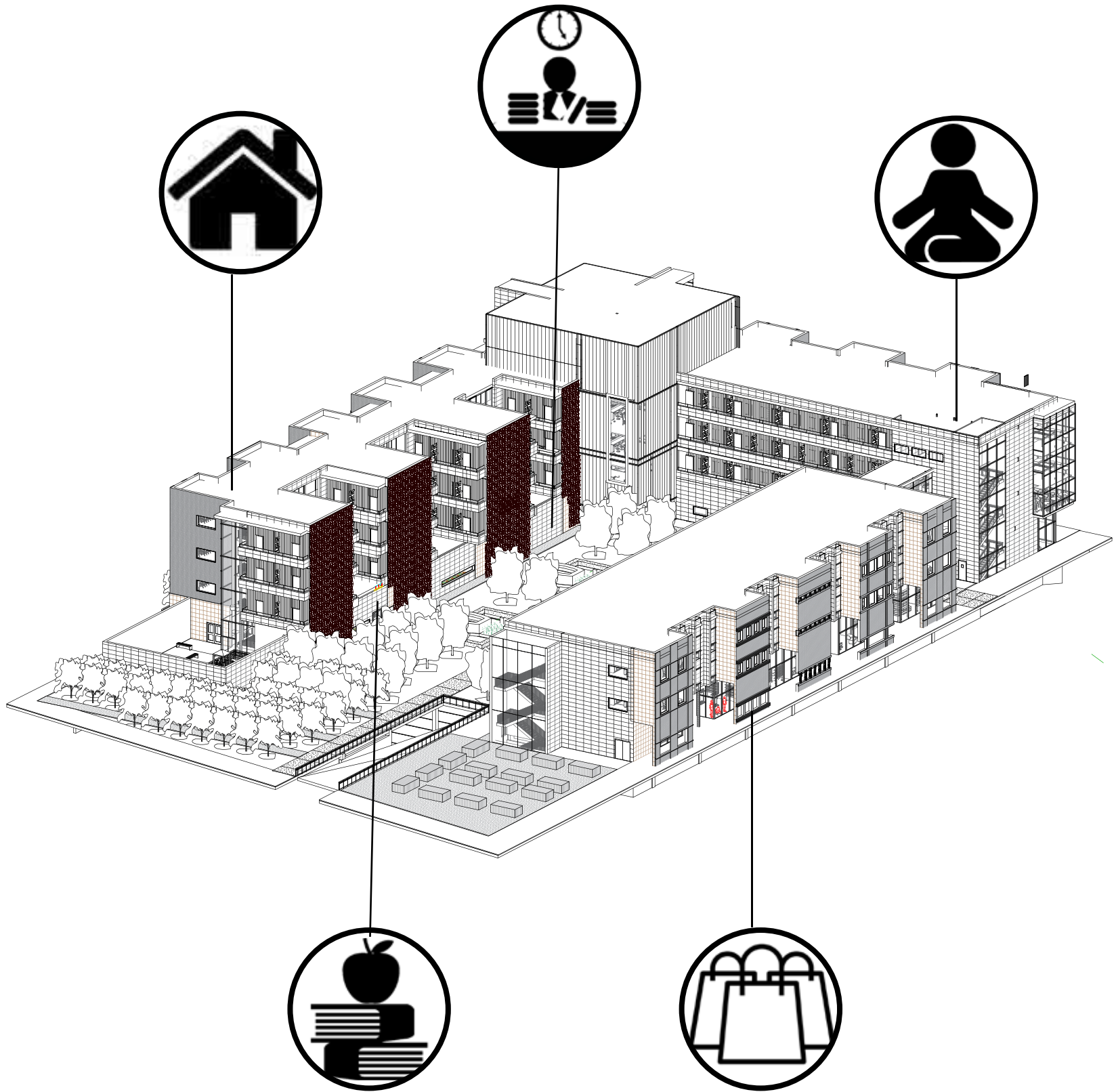
WELLNESS
At intake, residents have access to freshen up in the locker rooms. During the program they have access to nutritional health and fitness programs and facilities.

RESIDENTIAL
The complex has a capacity of 400 residents. Halls are comprised of “neighborhoods” with 15 residents on average that share community spaces for cooking and recreation.

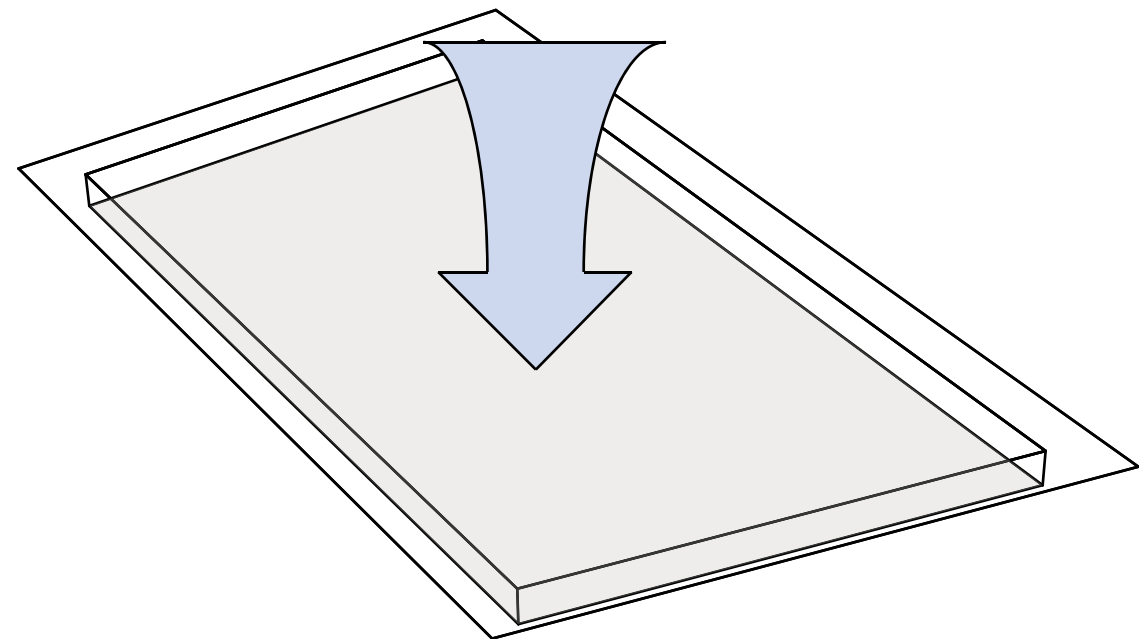
COMMERCIAL
Restaurant and shops are employed by residents in job training in various fields: floral design, cosmetology, and other crafts that the public can patron.

ADMINISTRATION
Management, case workers, and staff have an operational hub to keep the complex running.

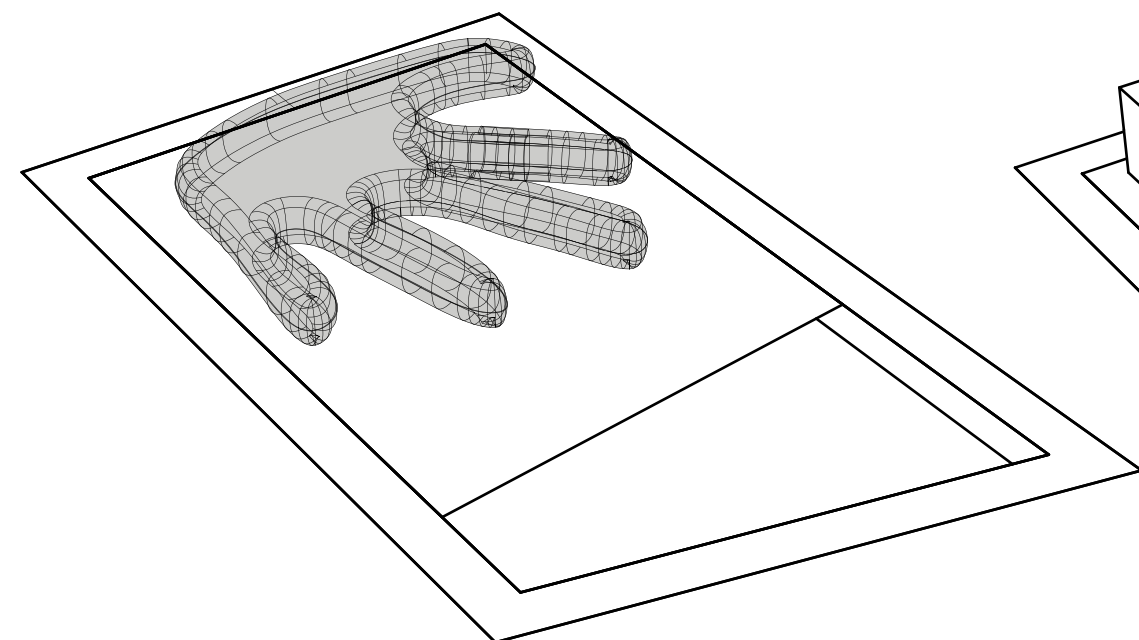
PROGRAM BREAKDOWN



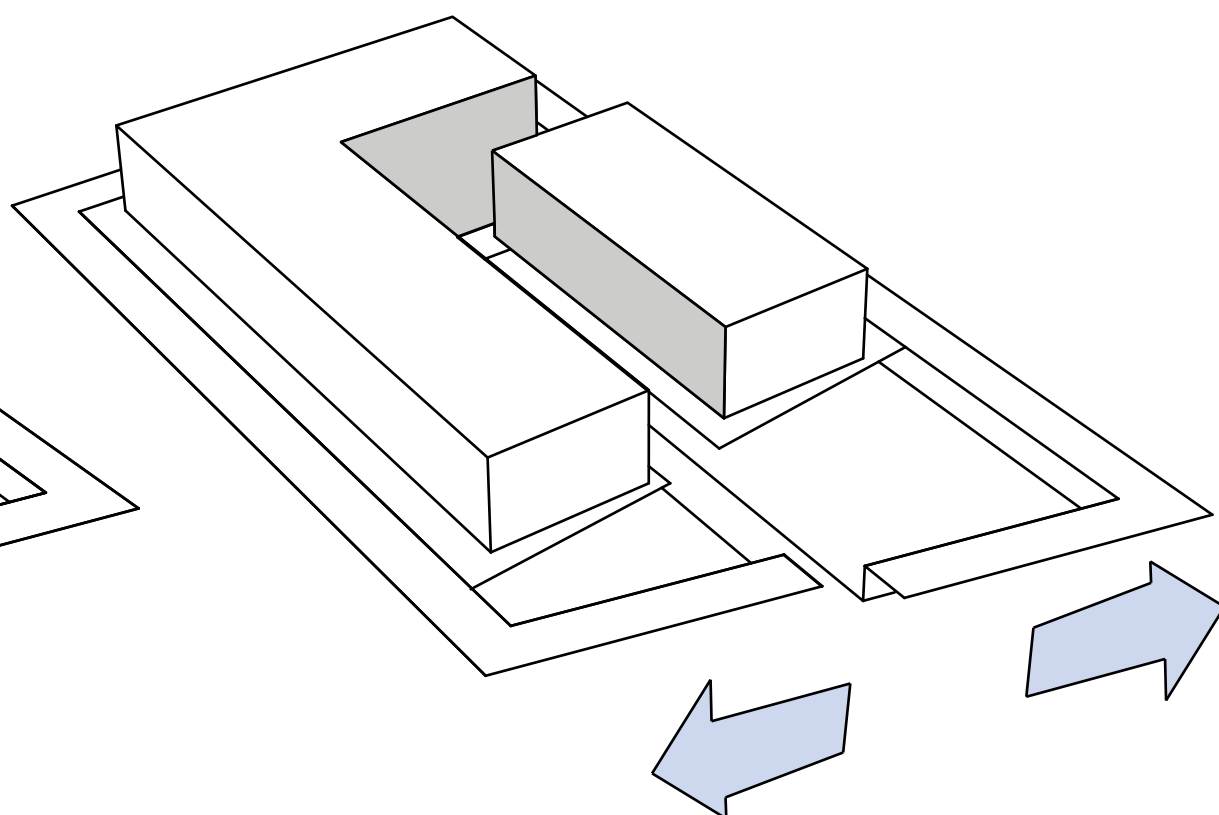
DEPRESS Preserves existing parking as a revenue source as well as creating a level to access the adjacent underground tunnel



BUFFER Building mass placed on South and West of site due to duality of users and pedestrian patterns of adjacent streets



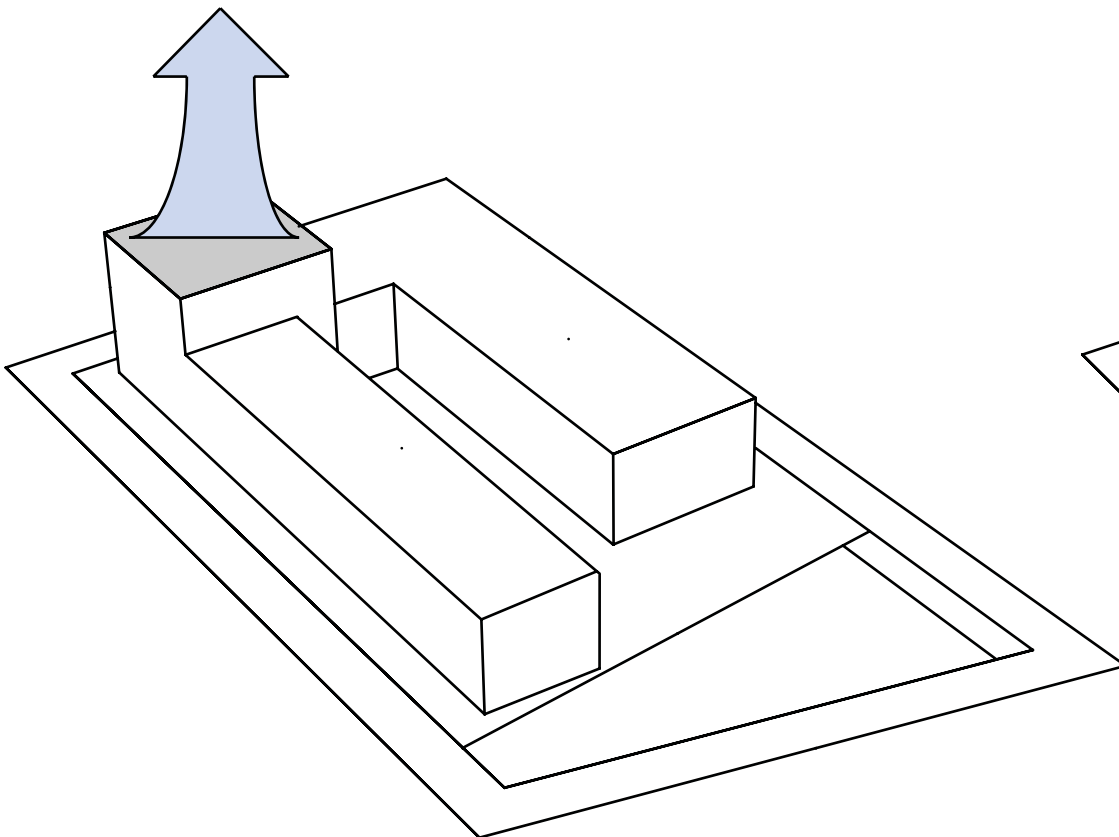
SPLIT Dividing the mass creates a central outdoor space as well as more surface area for outdoor access and views for rooms



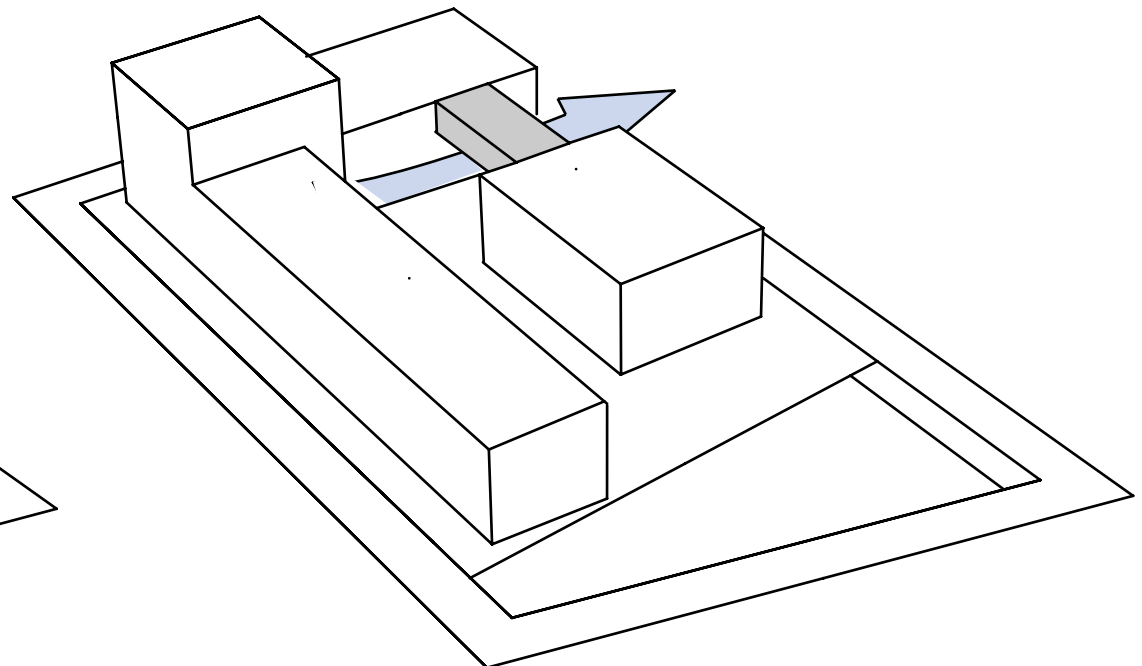
BUILDING PARTI

Designing a complex that caters to two user types made a framework of duality that the building design itself structured. It is both permeable and secure for different portions of the building based on the program which strongly influenced the massing process.

EXTRUDE Forming a symbolic lighthouse or tower draws residents to the location of intake and registration upon arrival



CARVE Being multi-use; a portal creates visual & direct access to outdoor spaces for the consumers and keeps flow in floor plans



SITE CONTEXT

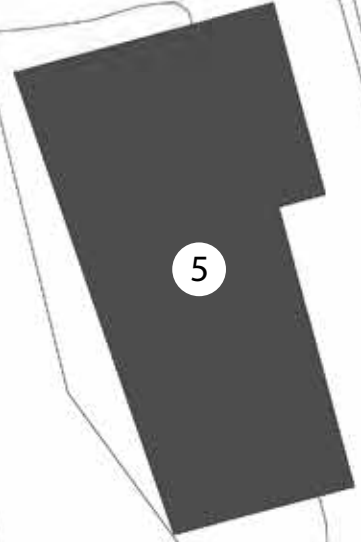
- 1 El Centro College
- 2 Bank of America Tower
- 3 Bank of America Parking Garage
- 4 Greyhound Bus Station
- 5 McDonalds



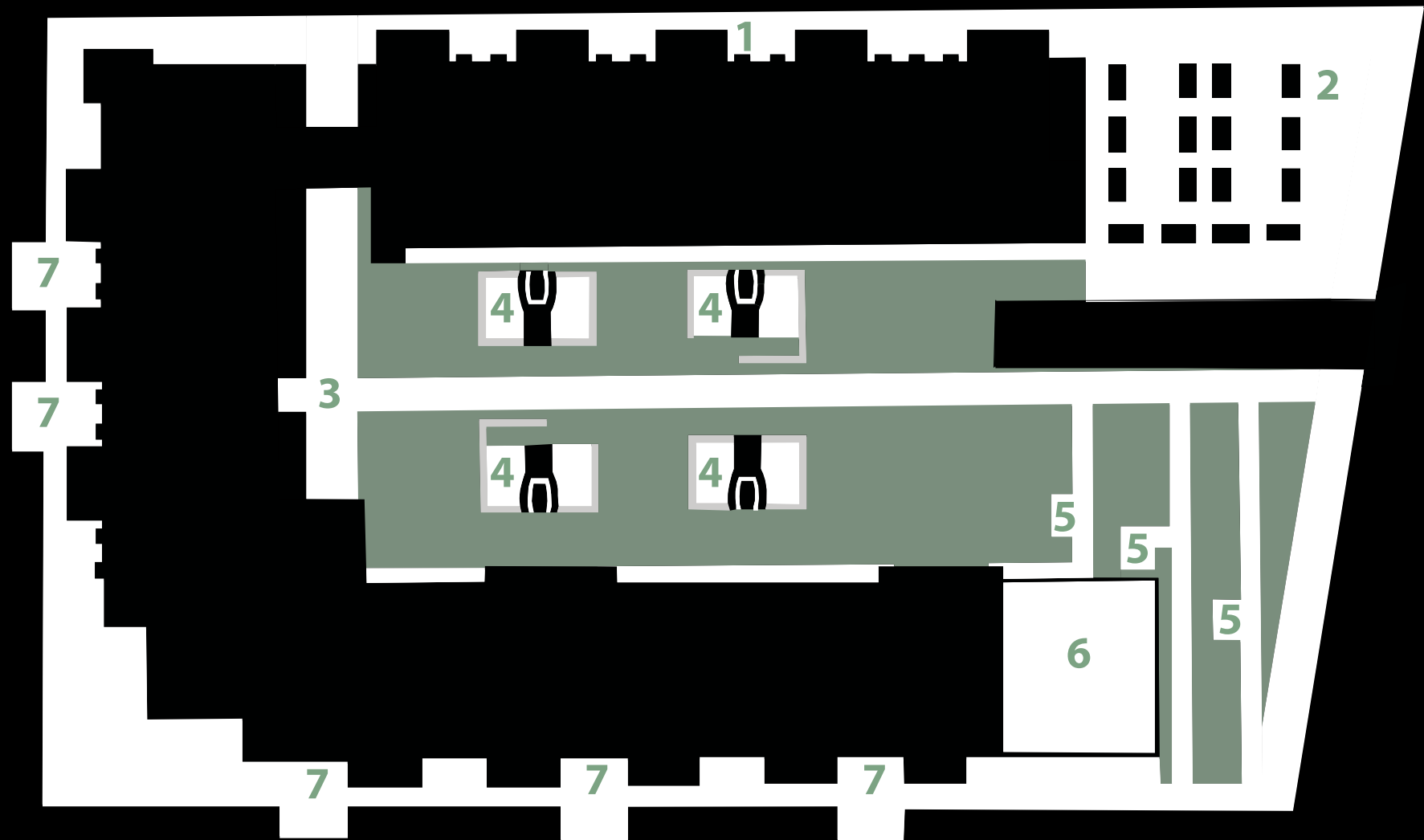
2



5







- 1** Shopping Arcade
- 2** Outdoor Market
- 3** Site Circulation Axis
- 4** Courtyard Social Seating "Rooms"
- 5** Reflection Gardens
- 6** Secure Playground and Dog Park
- 7** Parklets

Individuals that choose to reside in this Transitional Living Community are enrolled into a dual learning working program to gain new skill certifications.

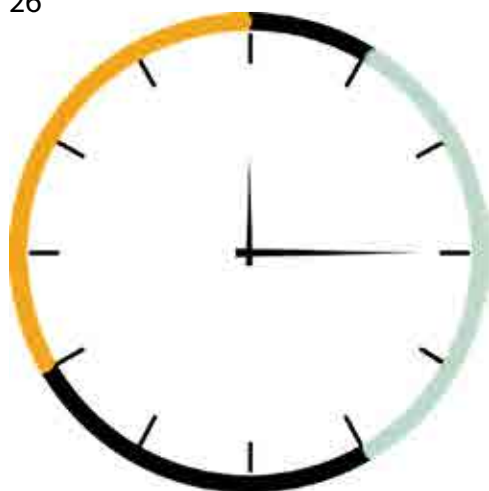
As residents progress through the program, they gain more independence. This is reflected in their housing accommodation type.

Individuals that come to patron the complex have a variety of activities to partake in including: eating, shopping and enjoying outdoor spaces.

INDIVIDUAL







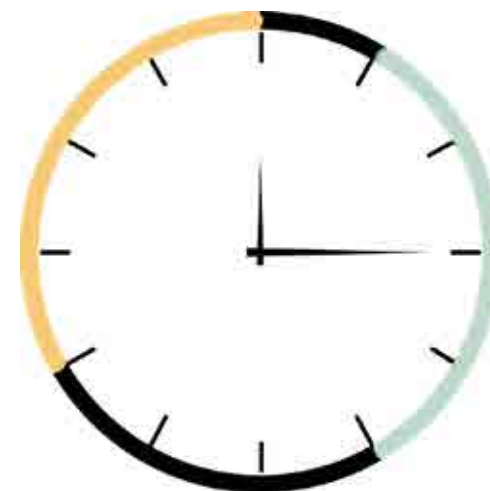
MONTHS 1-6

The first six months of the program are comprised of on site classes, counseling and job training. While in this stage accommodations are in the dorm units.



MONTHS 7-12

Months 7-12 include the same ratio of courses to job training (4 hours each). Half of courses are taken at the El Centro Community College adjacent to the site.



MONTHS 13-18

For the last 6 months, all education is through the College to complete chosen certification. Job training transitions to part time employment that is off site.



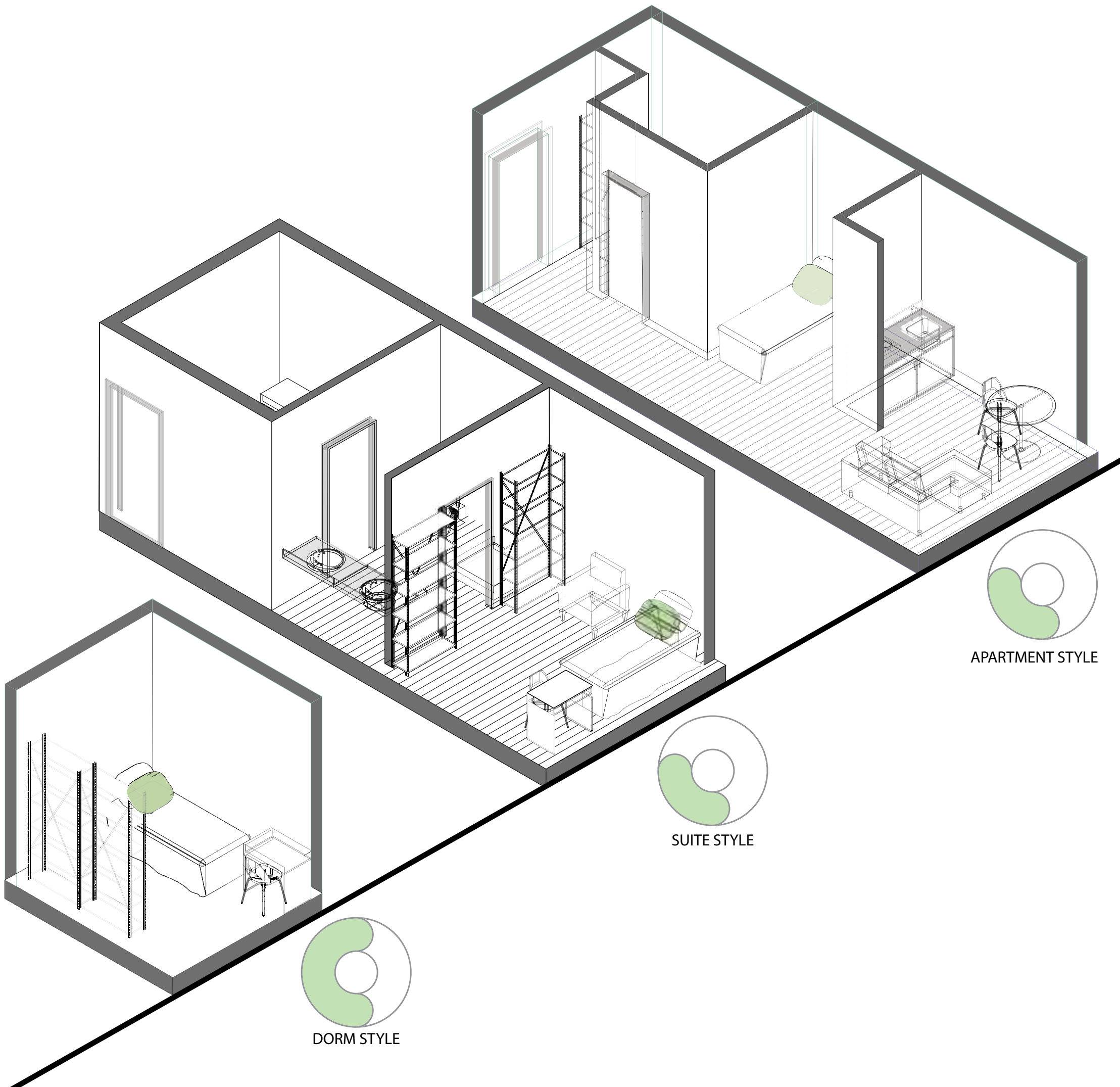
RESIDENT SCHEDULE

Residents maintain a structured and regular schedule comprised of education (YELLOW) and job training or employment (GREEN). As they reach milestones, more independence and responsibility is gained. This is reflected in housing accommodation type as well.



ROOM TYPOLOGIES

This complex houses 200 total: 100 dorm style, 50 suite style and 50 apartment style housing. Upon arrival residents live in a dorm style room and use shared showers and restrooms. After 6 months of progression in the program, they move into suite style housing where a bathroom is shared with one suite mate. Both dorm and suite style housing have private individual balconies. As many previously homeless individuals struggle with claustrophobia, the balcony helps compensate and accommodate by giving access to outdoor living space while they integrate back into the built environment. Lastly, the apartment style housing is the last stage to full independence in the last 6 months before graduating from the program. At all points of the program individuals pay 30% of their net income for the month to aid in the habit of fiscal responsibility.



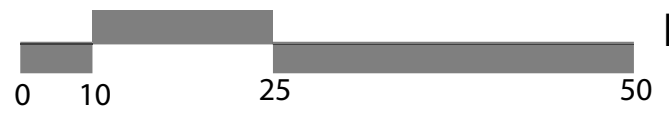
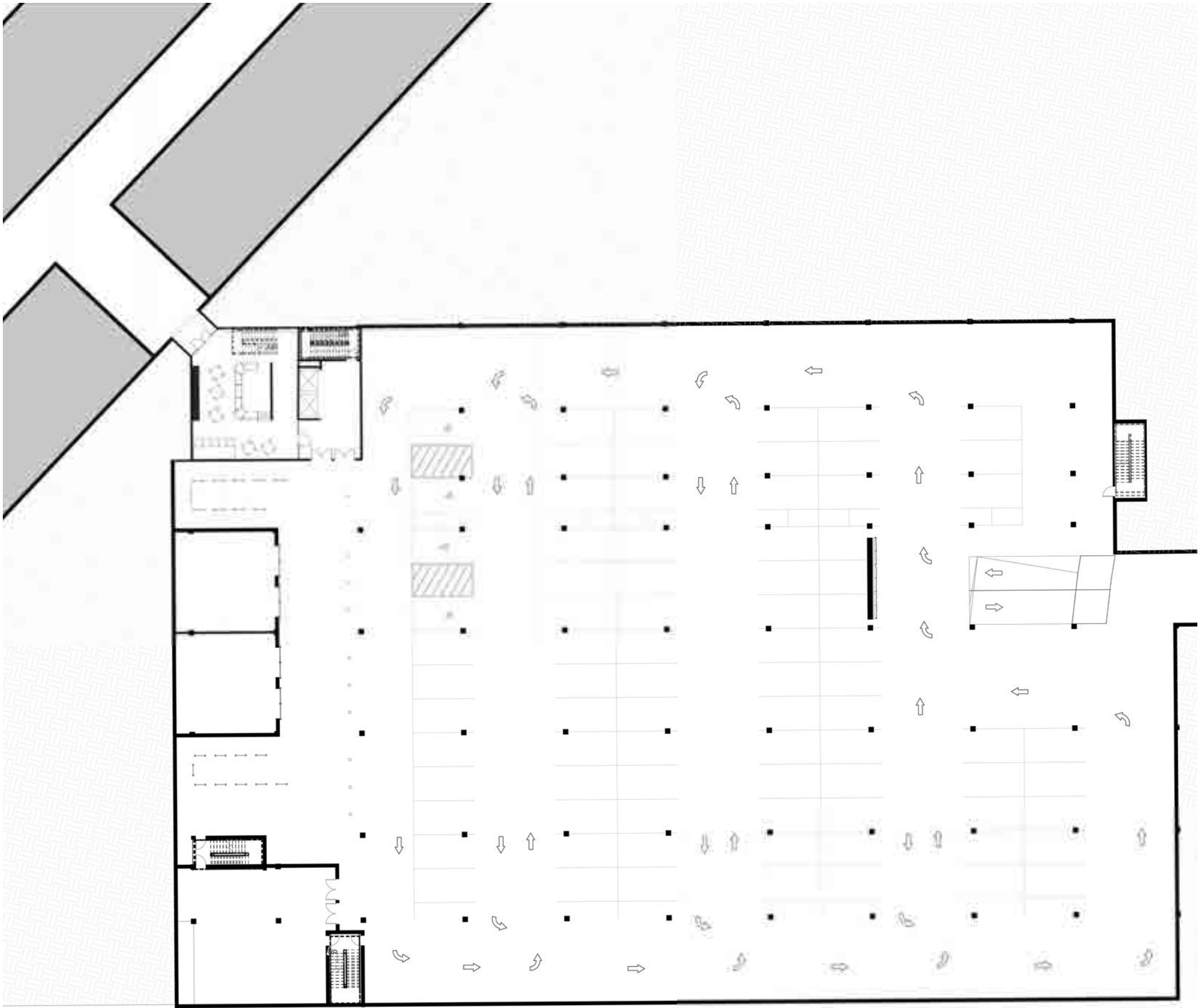


0 10 25 50 **LEVEL 1**

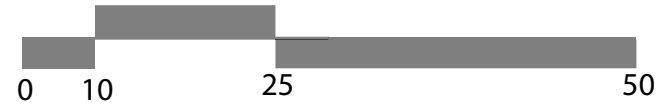
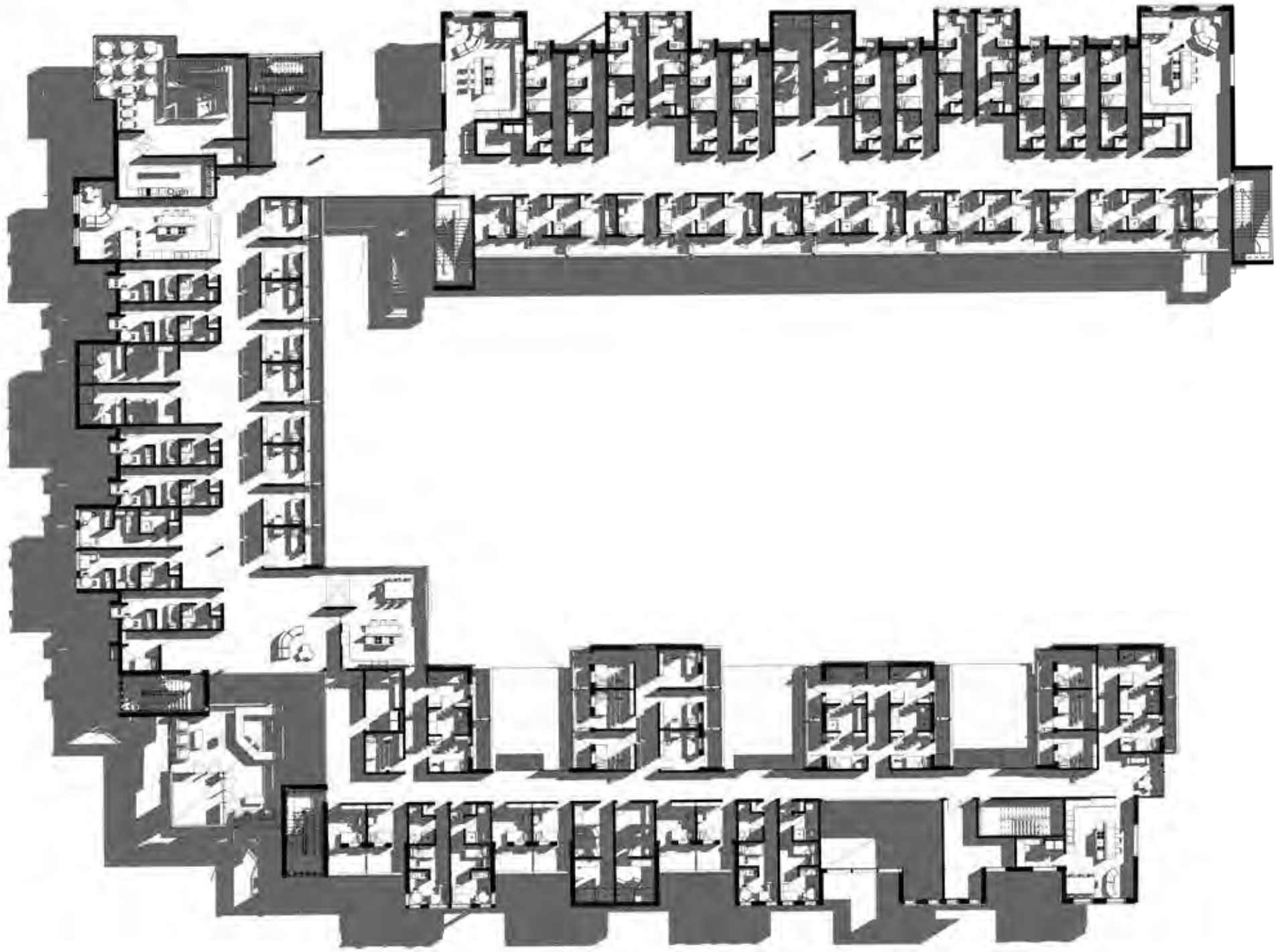
FLOOR PLANS

Level 0 seen on the following spread has parking for revenue, PO boxes, storage, and a convenient store that has direct access to the existing underground tunnel at the corner of the site. Level 1 has shops and restaurants on the North wing, Wellness Center in the West wing, and Administration and Education in the South wing. Level 2 has the public restaurant that is isolated from the rest of the residential floor. Levels 3 and 4 are fully residential, and level 5 is the rest of the wellness programing with pool access and locker rooms.



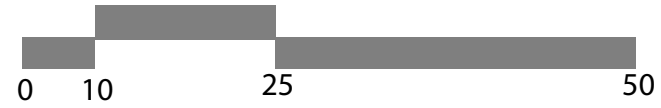
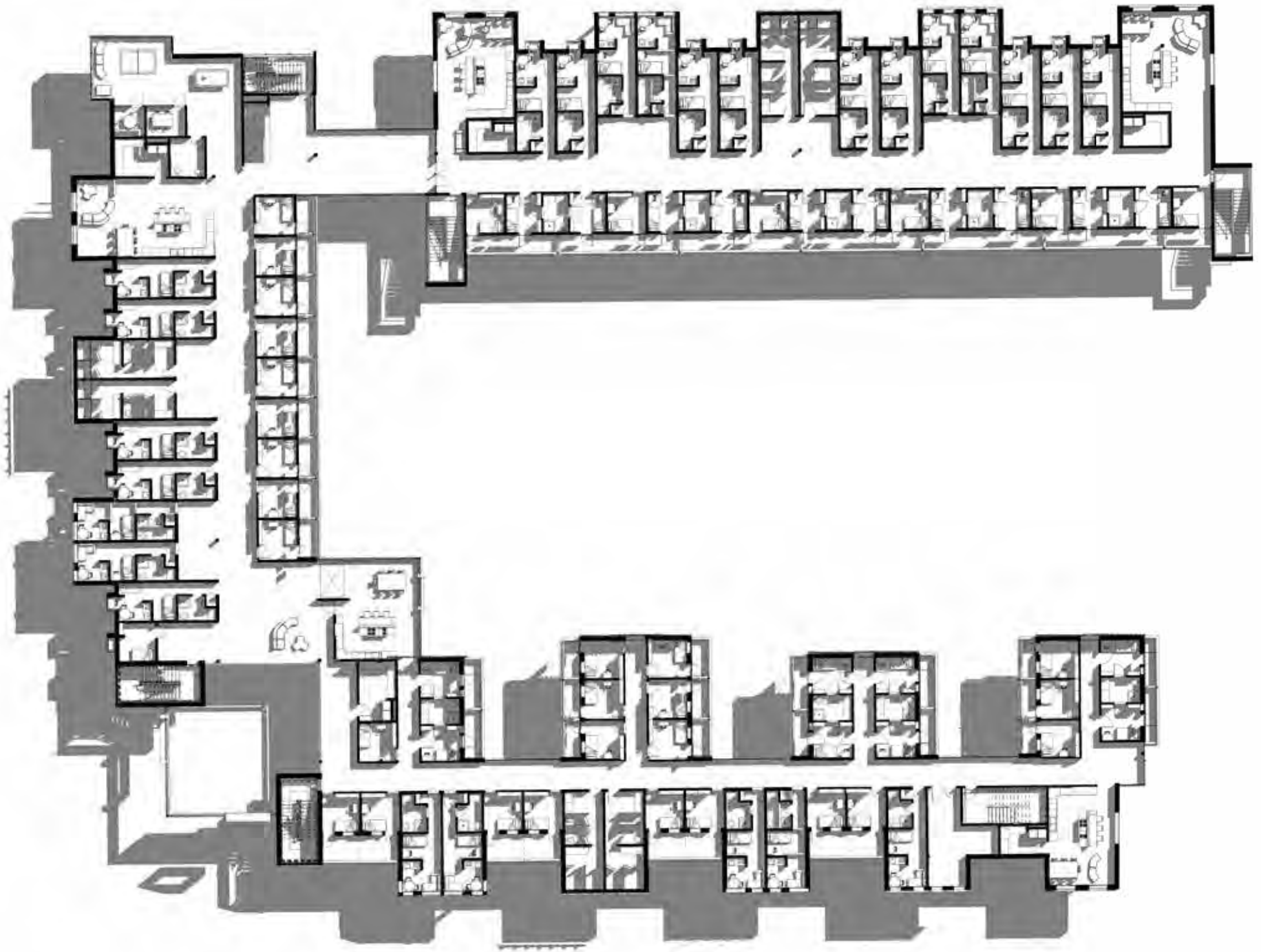


LEVEL 0



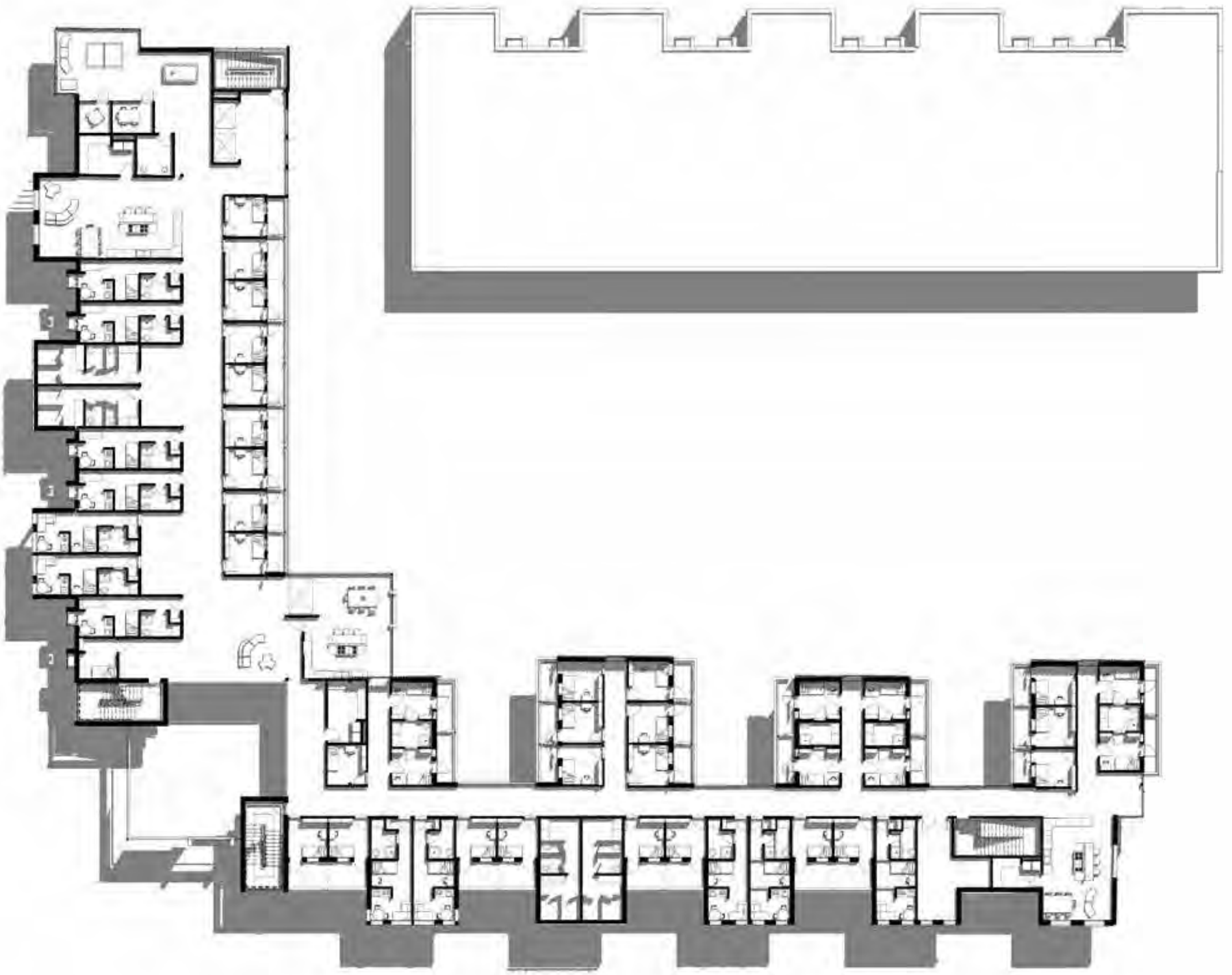
LEVEL 2





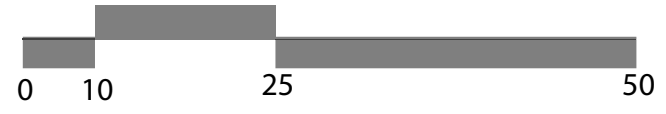
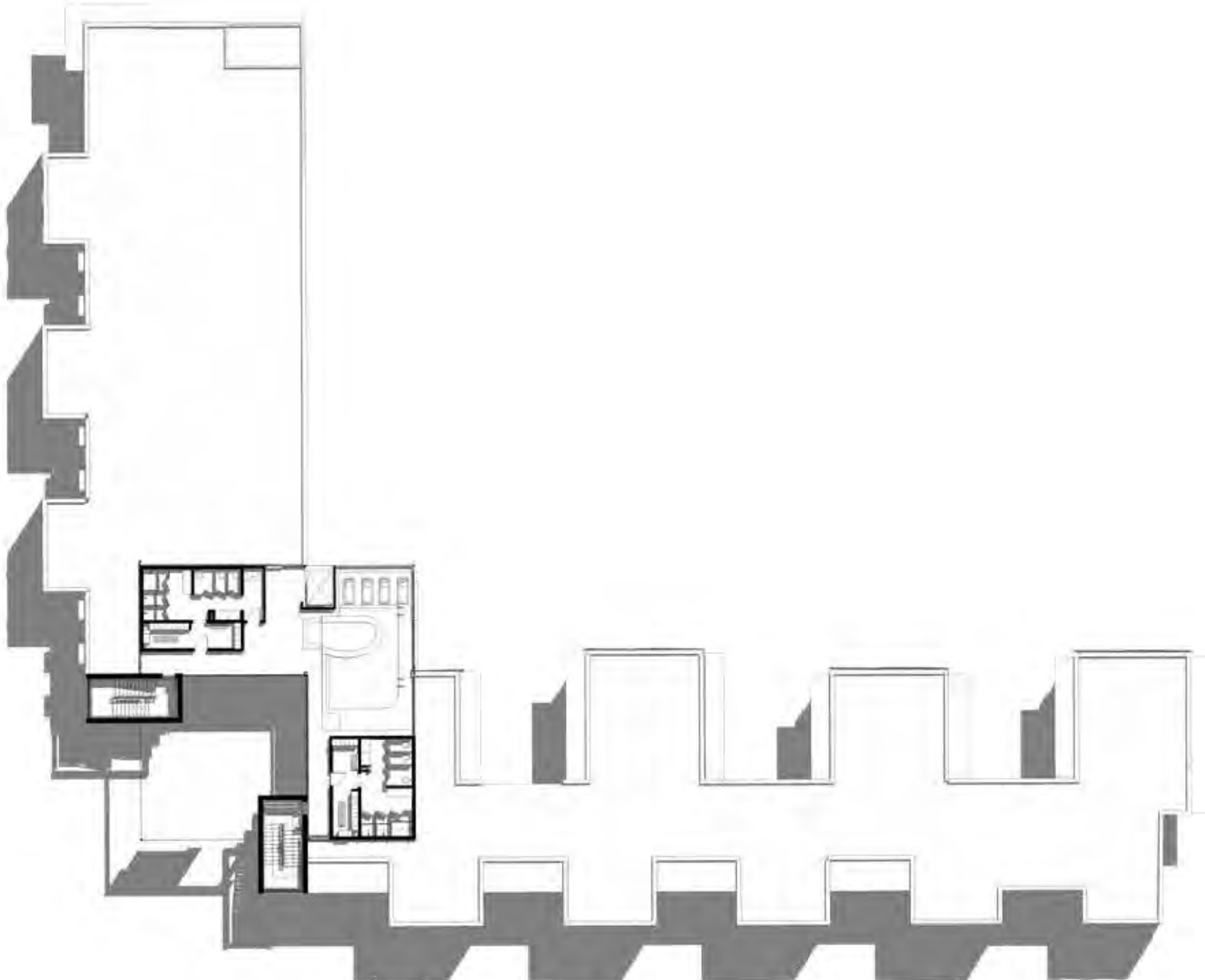
LEVEL 3



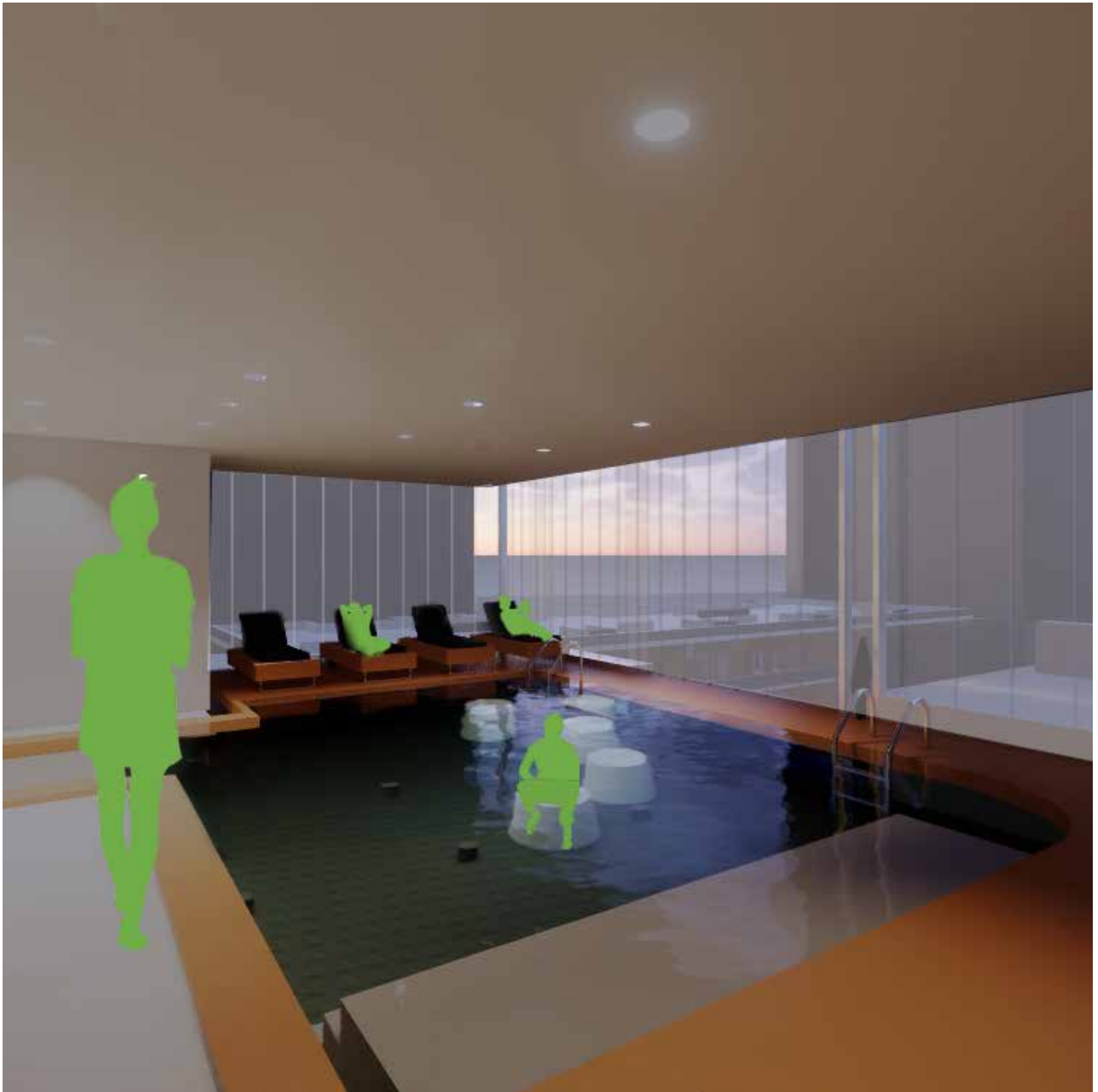


0 10 25 50 **LEVEL 4**





LEVEL 5



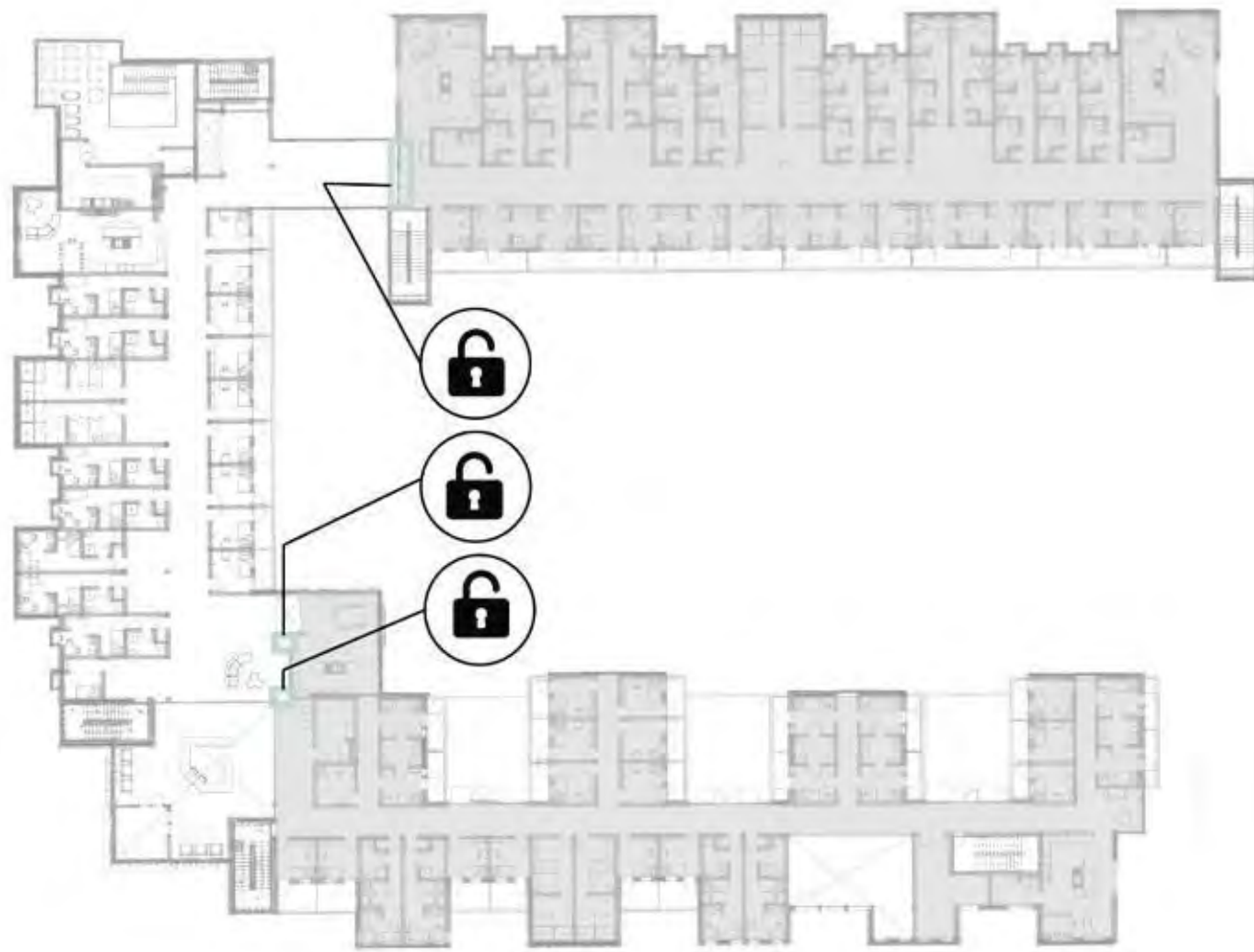
COMPLEX SECURITY

Security and stability are two of the principle attributes that those who have and are experiencing homelessness seek to obtain in order build a foundation to move beyond survival mode and into growth physically, mentally, and economically. Three of the security measures taken which are shown in the diagrams include: portions of the building for public access in green that are isolated from residential zones, residential levels by gender - male floors are designated to two floors as 75% of homeless are male, and the access control system on the residential floors so each wing can be isolated if or when a situation arises.

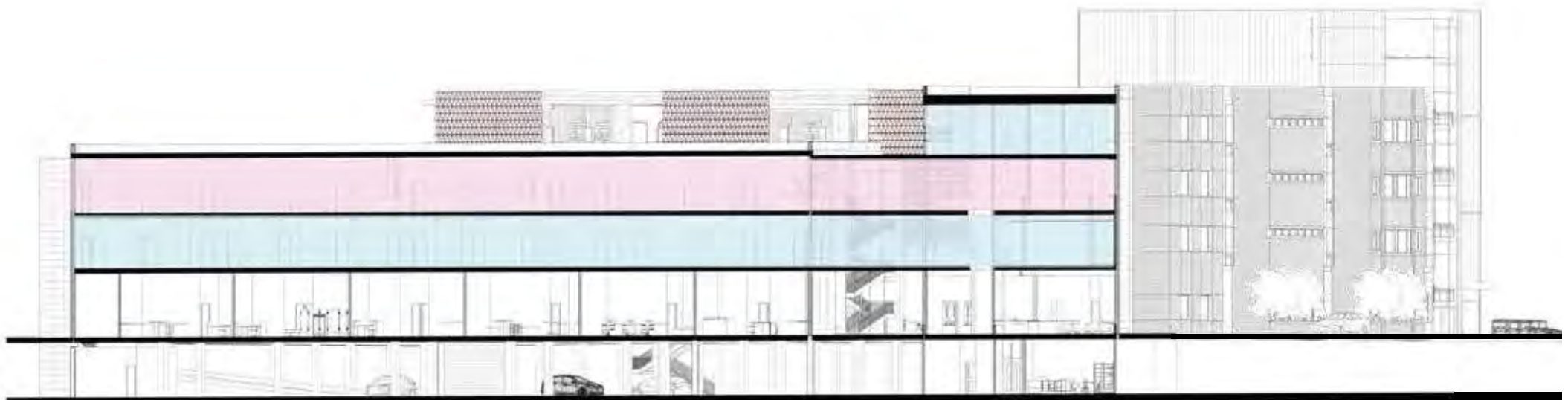
PUBLIC ACCESS



ACCESS CONTROL SYSTEM



LEVEL BY GENDER



Circular Economy is explained and incorporated into the building material choices as a process of building transformation and reducing waste, energy and cost.

This chapter includes Construction Details in the design of building envelope, details related to wall sections and other materials.

Material choice selection is evaluated by how they influence the qualitative as well as quantitative value of spaces by using higher quality items.

FABRICATION





CIRCULAR ECONOMY

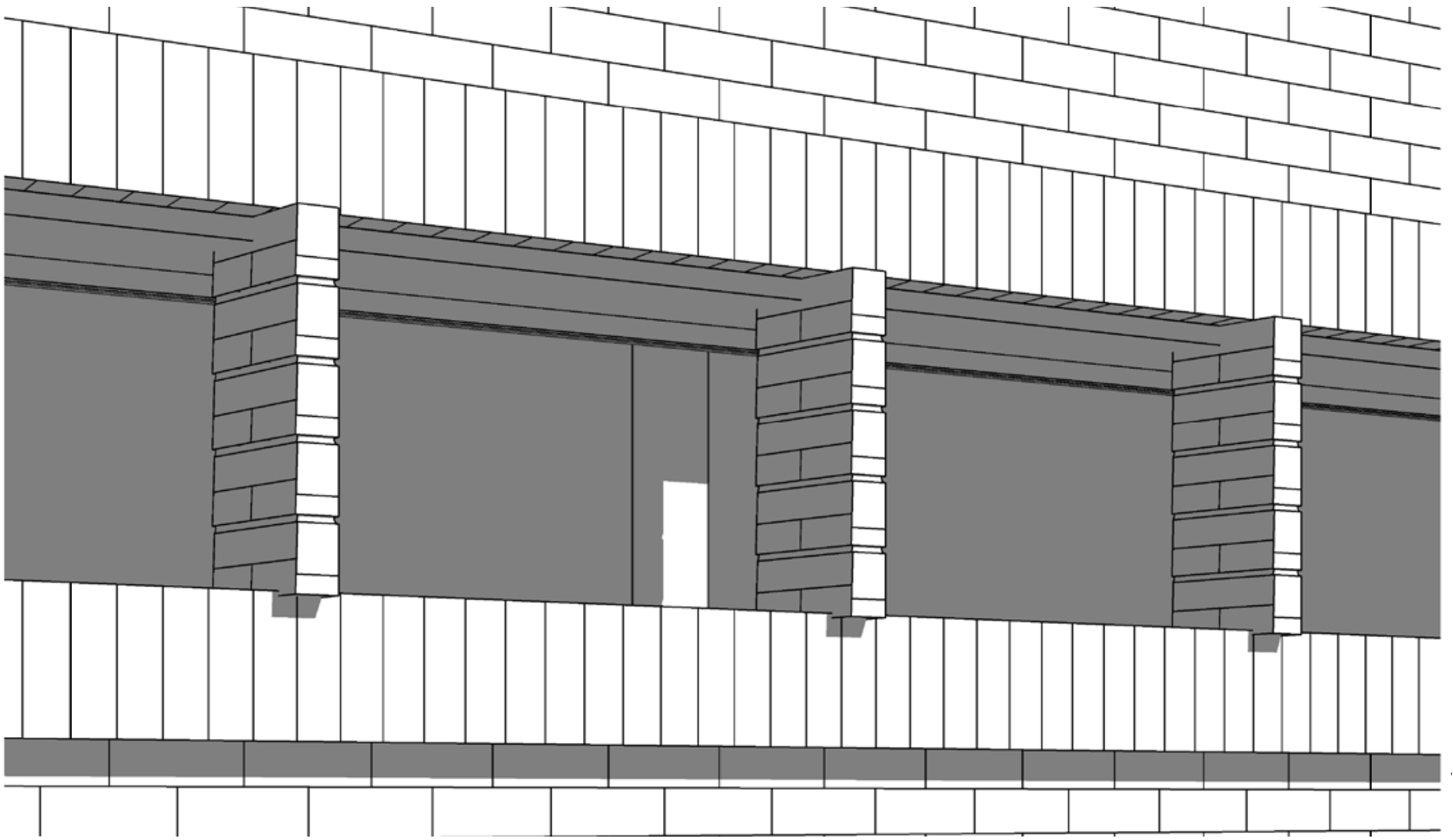
The circular economy is the process of taking initially linear production processes that end with landfill waste and recycling, repurposing or reusing the material rather than starting with raw materials to produce products. Greenhouse gas emissions are reduced from 62% to 38% when using a supply of products and services already in use as opposed to the extraction and production process to use raw materials. Materials in this project that are a part of the circular economy are: Channel Glass (60% recycled and used in the complex “tower”), Recycled concrete (low cost and environmentally friendly), and a building skin and partition material from GM called Offals.





BRICK TYPOLOGIES

Bricks are categorized as a sustainable material as they are made of 100% recycleable material. This makes them a fitting material as this complex represents the place and point of transformation for many lives. The diversity and versitility that can be found in brick and brick designs makes this 92,000 ft² building personal rather than institutional. Each of the typological 'Row Houses' on the outer envelope of the complex gives individuality, identity, and helps in wayfinding and site orientation. Residents can identify specific designs as a shared comon space, row house, or the specific row house that they themselves live in.

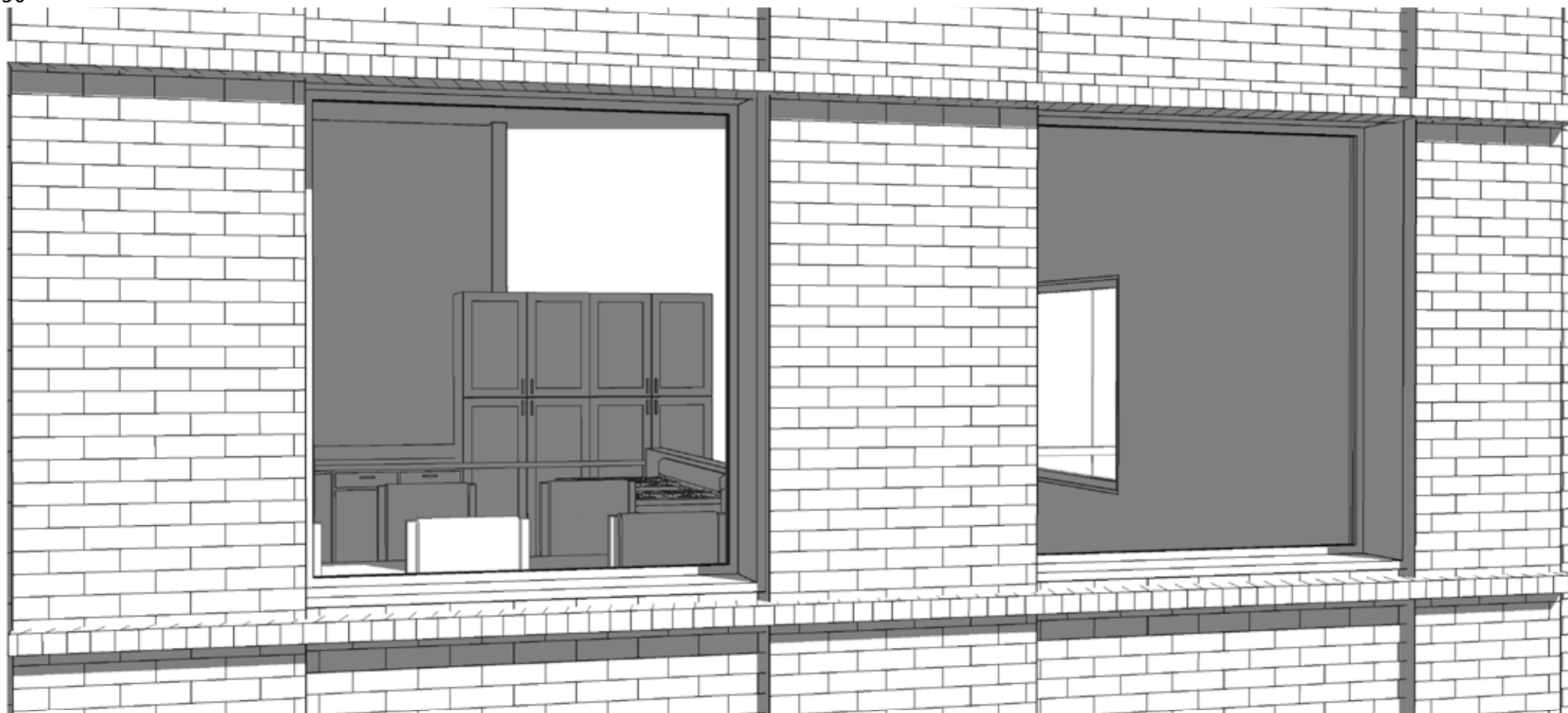


BRICK DETAILING

Used in locker Rows; allows light without visibility

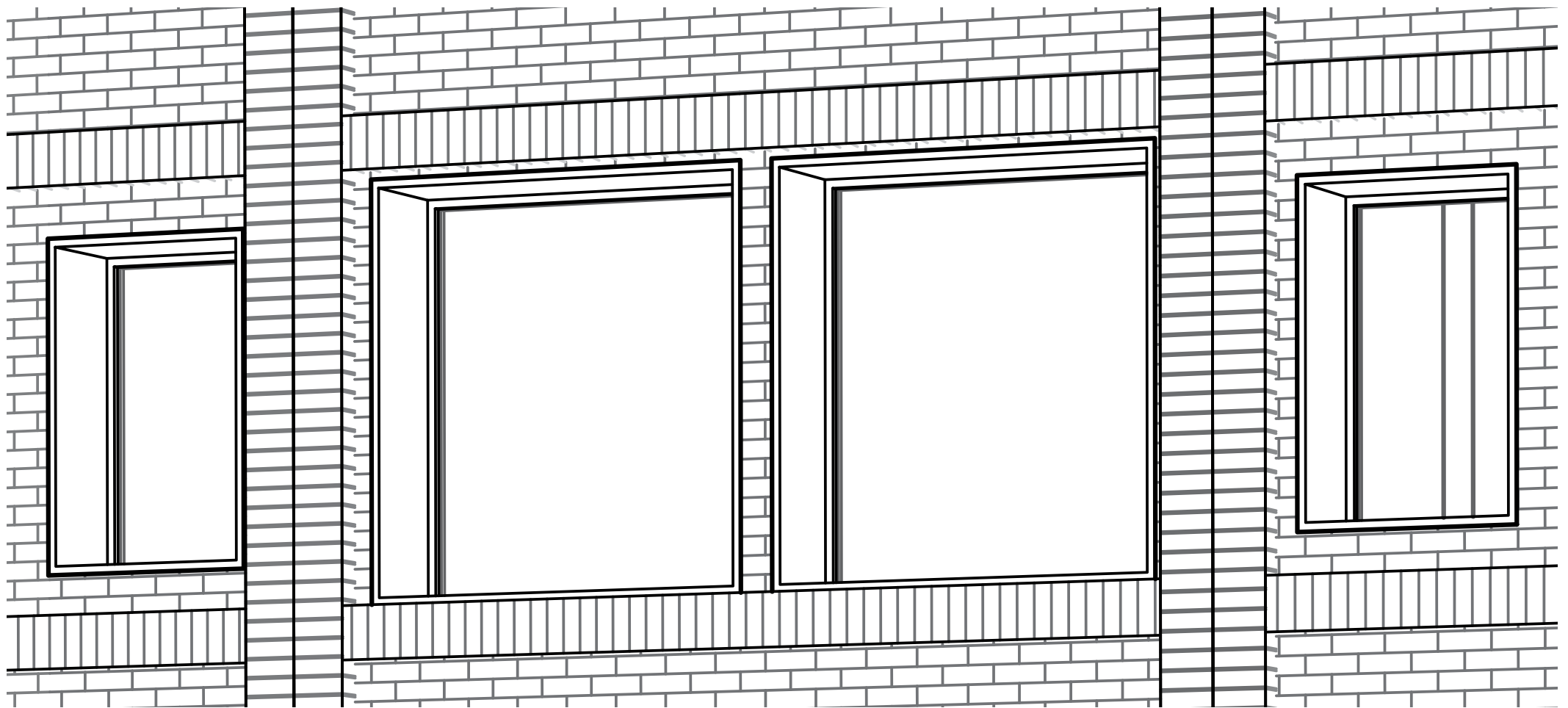


WEST ELEVATION



BRICK DETAILING
Row house for Community Spaces

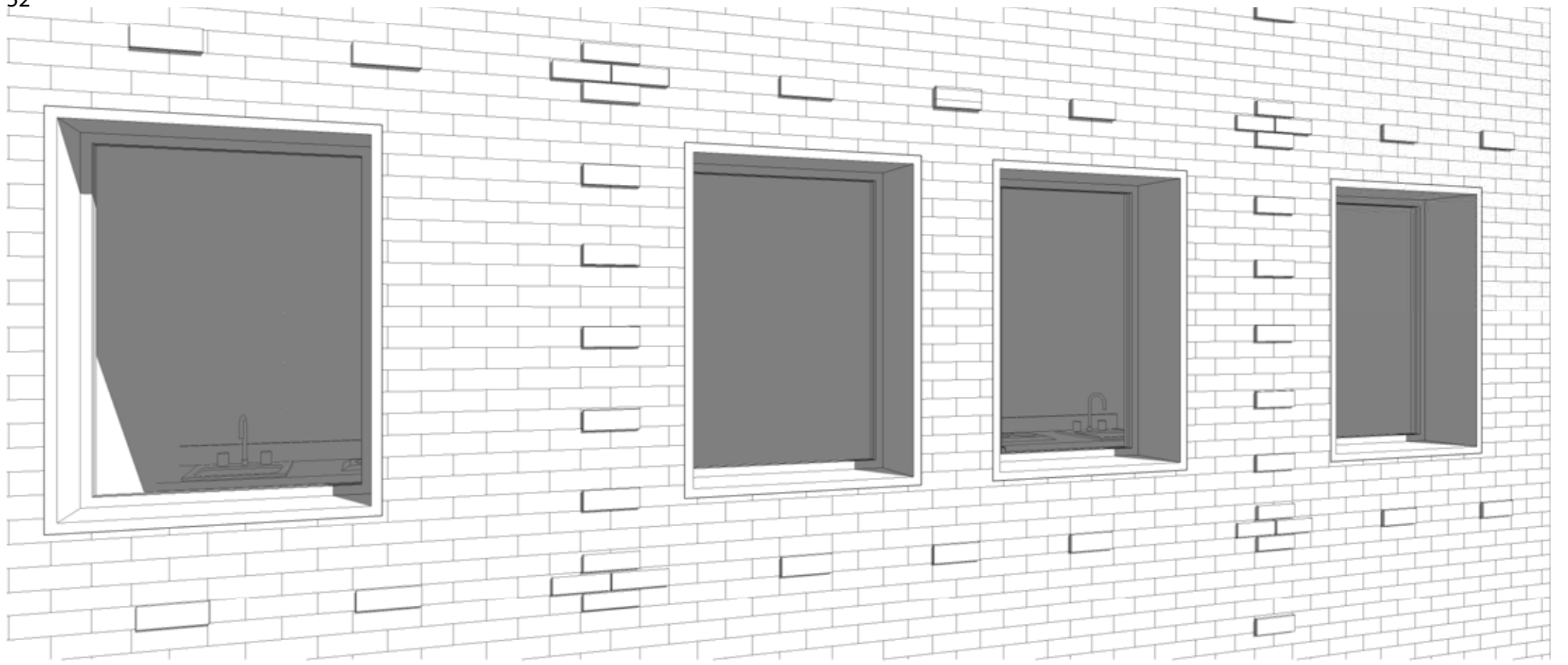




BRICK DETAILING
Row house for Apartments

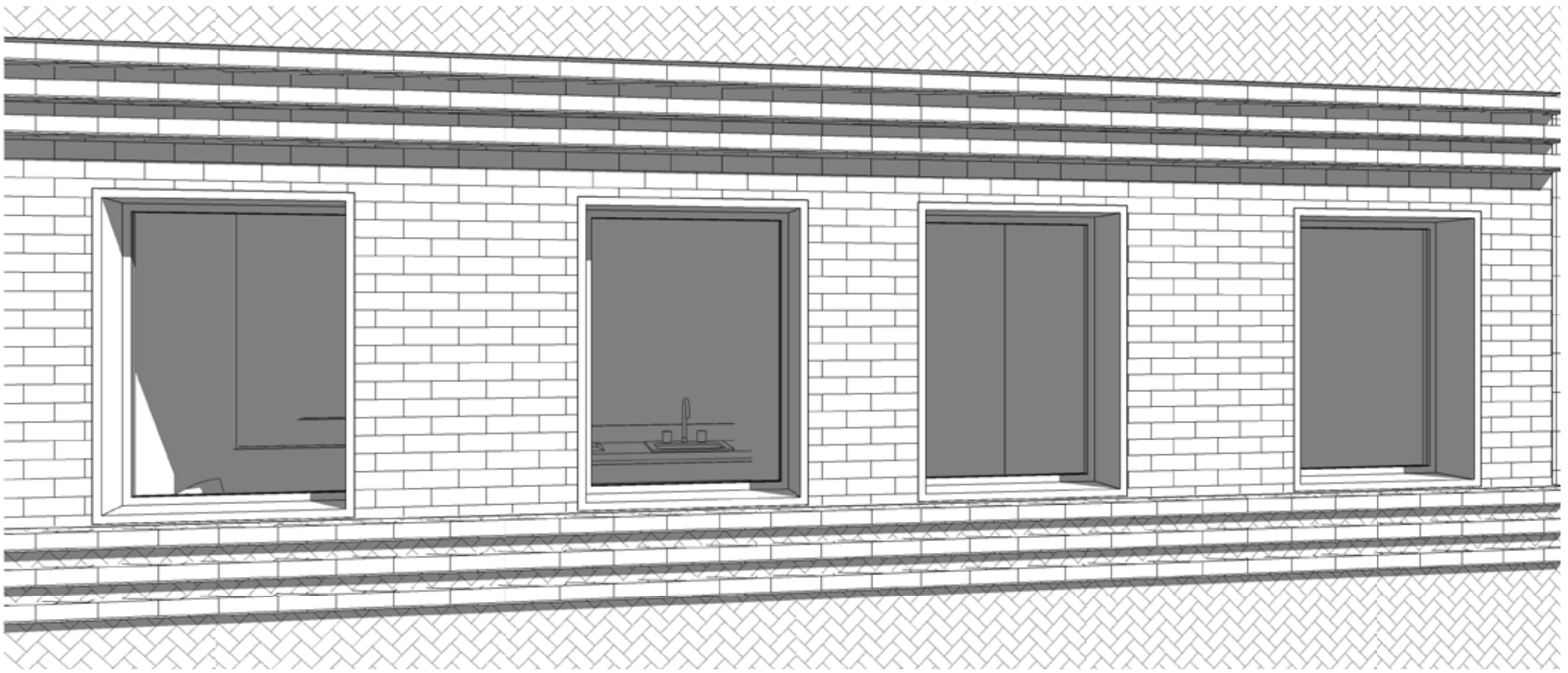


NORTH ELEVATION



BRICK DETAILING
Row house Apartments





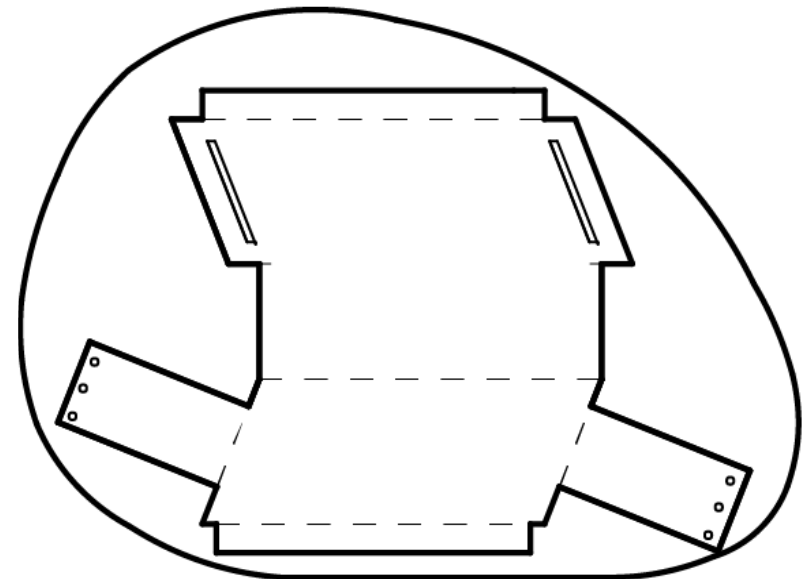
BRICK DETAILING
Row house for Apartments



SOUTH ELEVATION

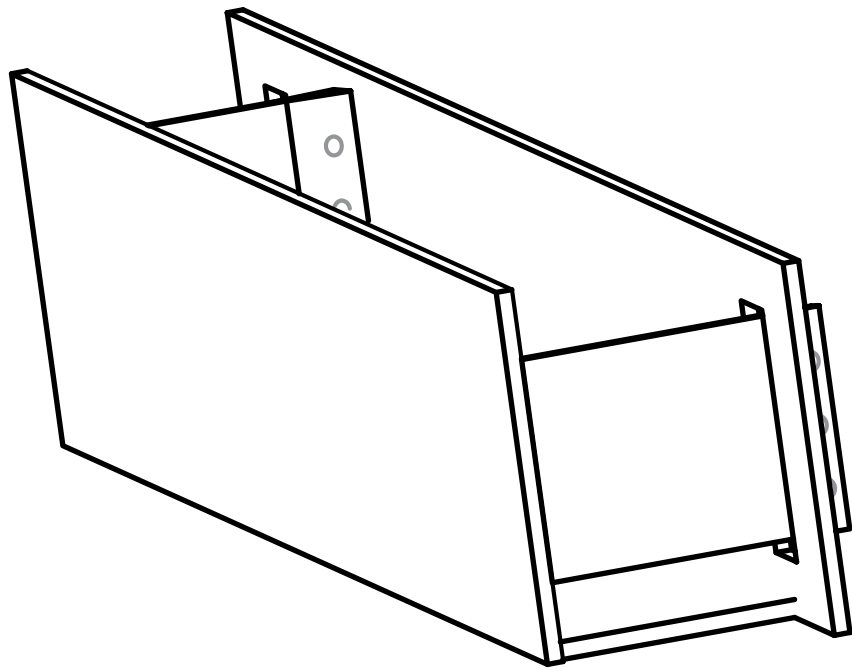
OFFAL DESIGNS

Offals are the window cutout waste that come from metal sheets that are a part of GM's vehicle body production. As a part of a Texas A&M faculty Ahmed Ali's research, his studios have made building skin designs with the previously wasted offals. In the spirit of transformation this product that falls into the circular economy is an appropriate material. Different vehicles have different offal shapes,. One design selected to use is from a former student and was incorporated as building facade material. For the balcony partitions, I designed an offal planter box that serves as a privacy screen as well as a place for biophilia to be dispersed for all balcony residents.

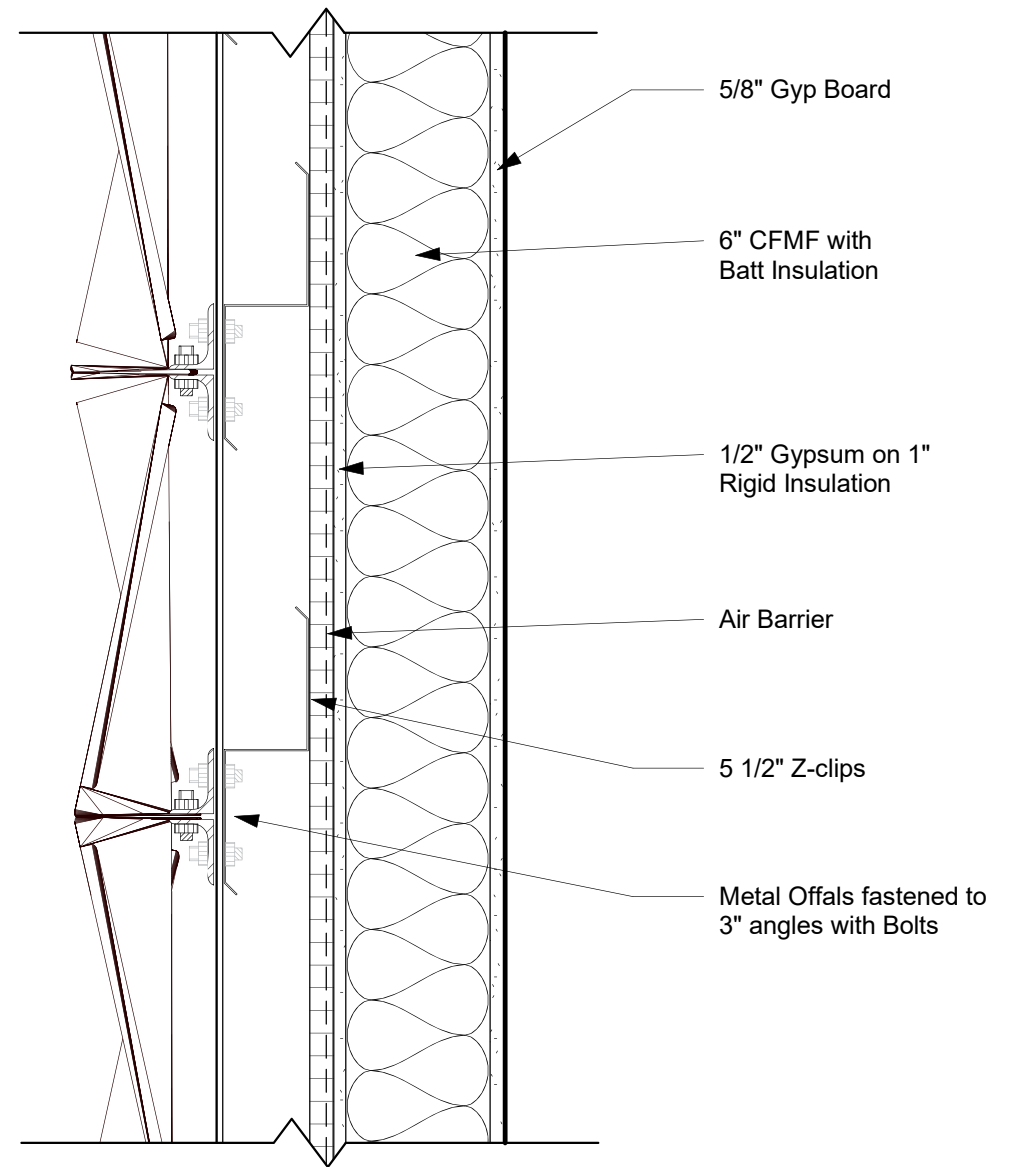


OFFAL 1

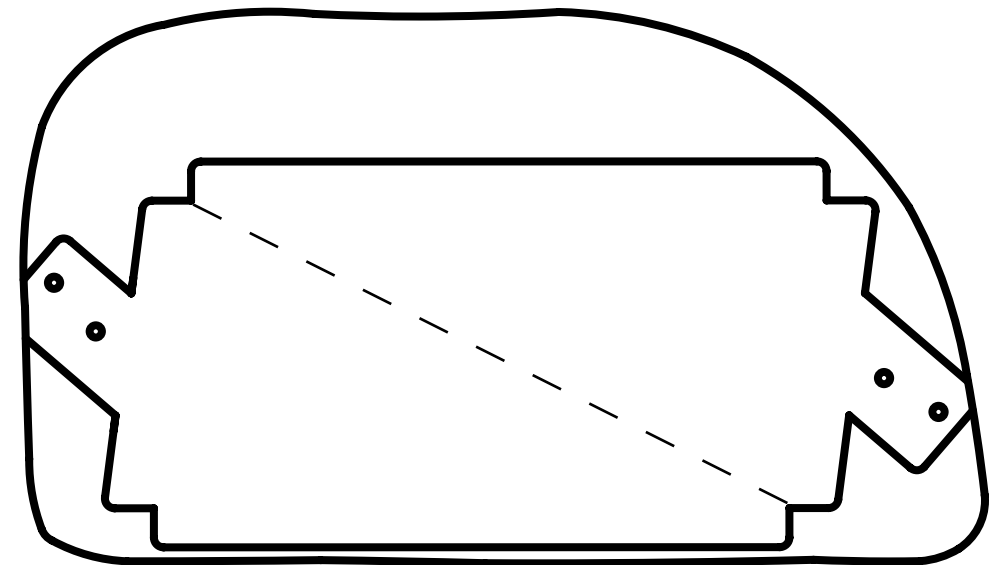
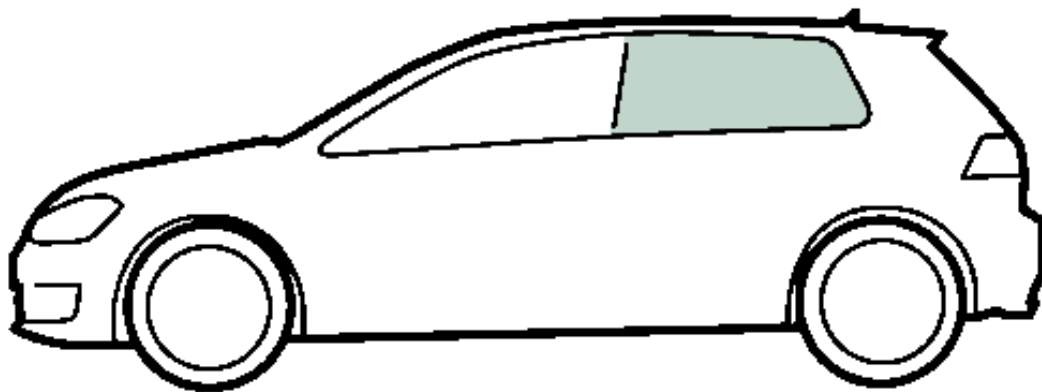
DESIGNED BY KATELYN MARKHAM



OFFAL 1



OFFAL 11

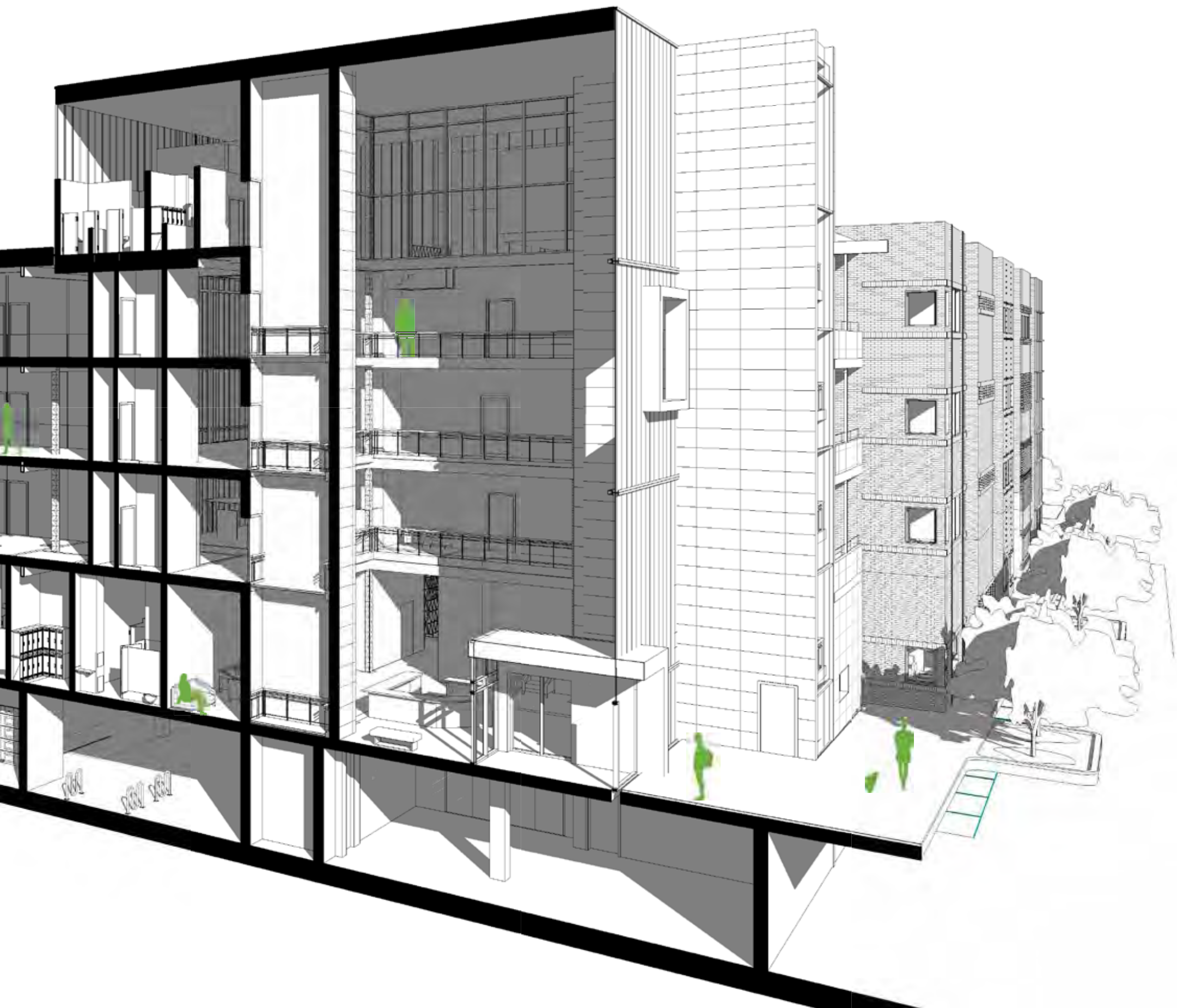


OFFAL 11
DESIGNED BY XIWEN MA

3D SECTION

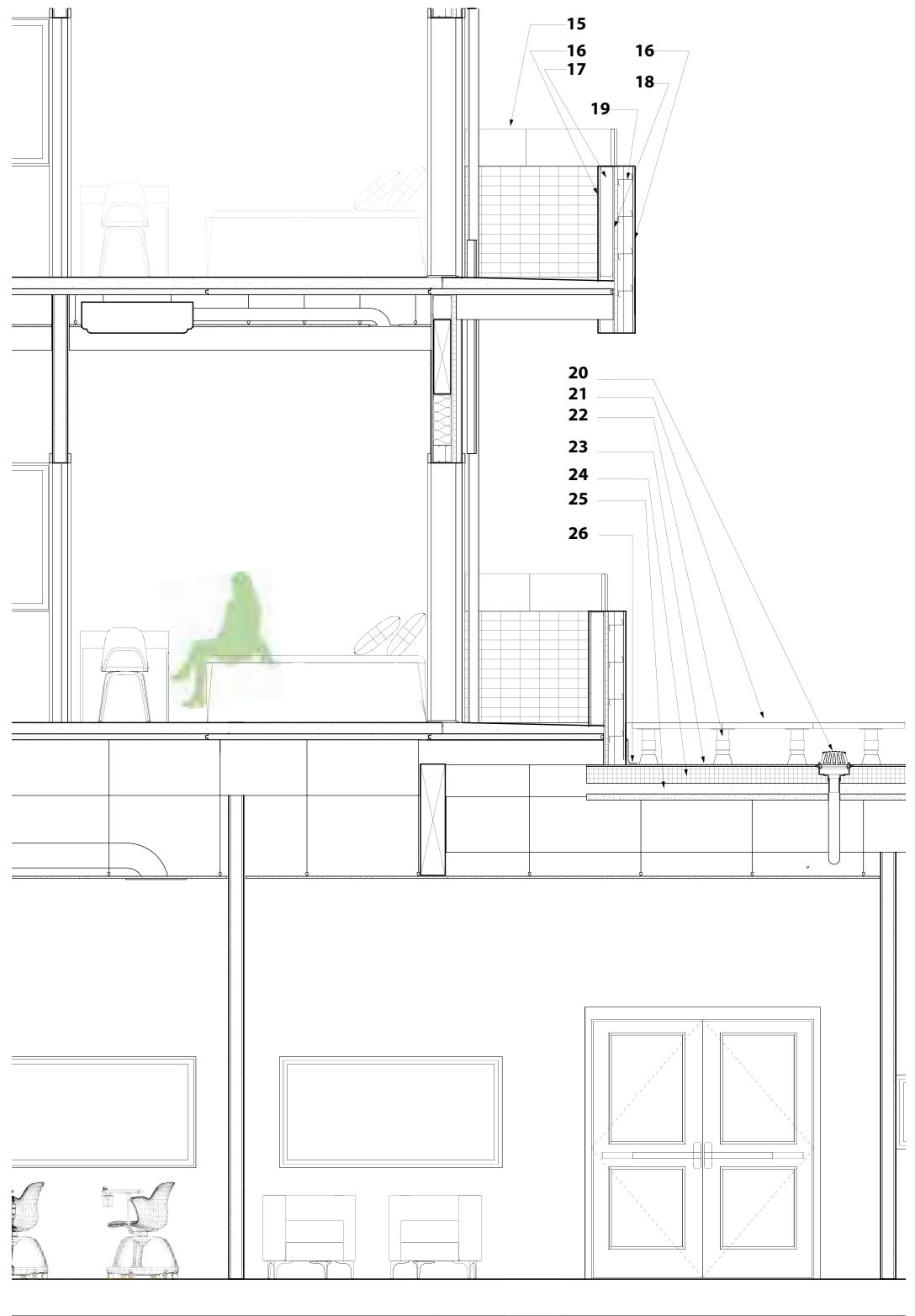
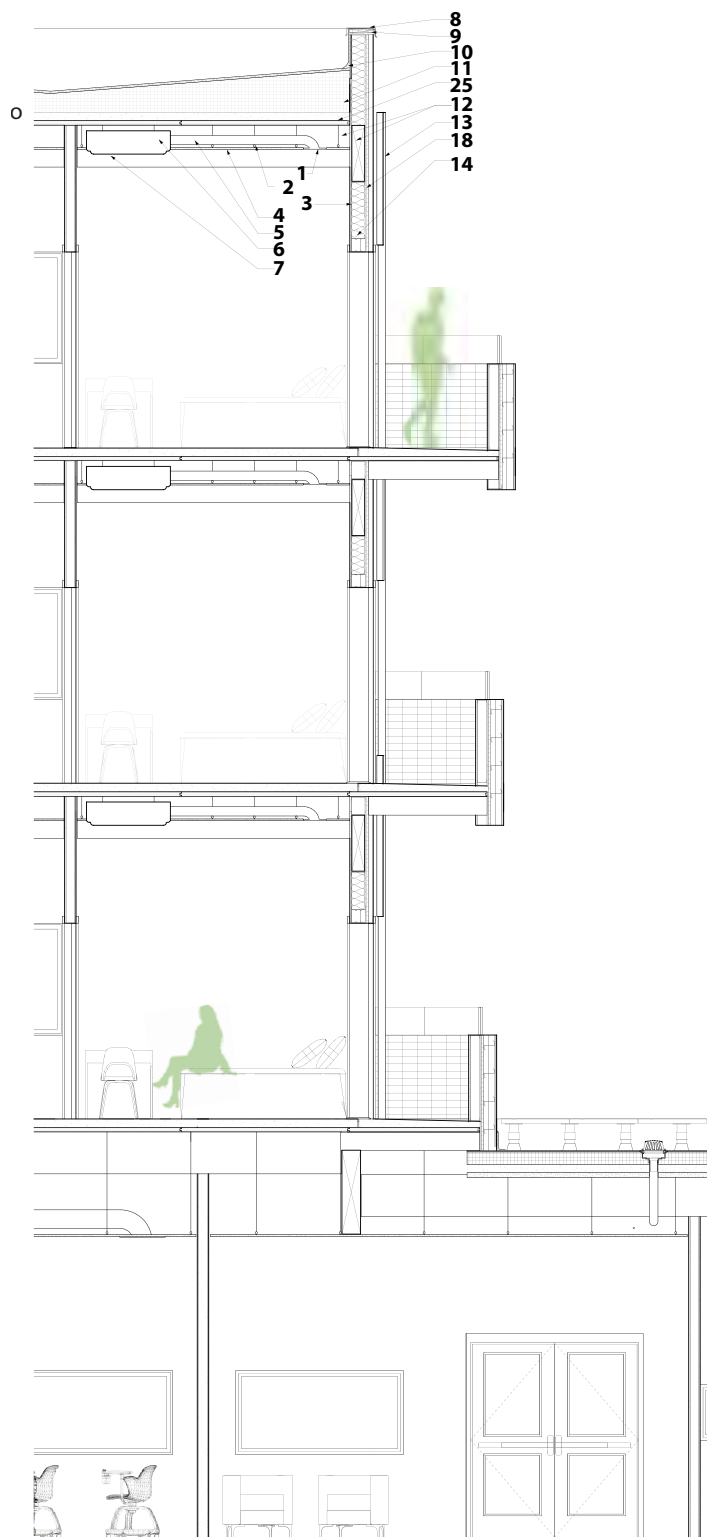
This view shows the volume proportions of the atrium in the tower, the transfer beam in the gym on ground level, the housing rhythm, as well as the underground connection from store to underground city tunnel at the northwest corner of the site.





WALL SECTION

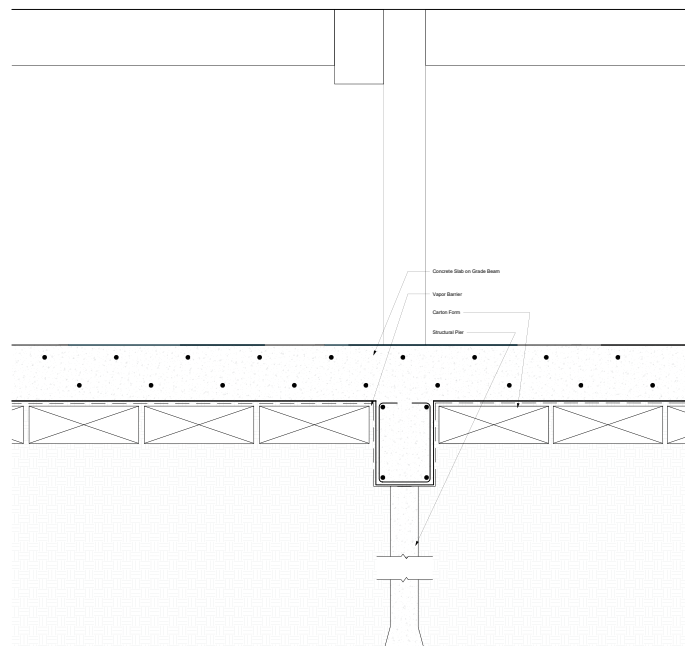
This wall section was taken at the South wing of the complex. Key points of interest here are the VRF systems in each residence for individual climate control and the walkable roof top area. The roof drains, insulation and membranes make a water tight sandwich below the pedestal paver supports, and the IPE tiles are important details in concealing and controlling watershed. The critical point in waterproofing and keeping the roof watertight is the healthy overlapping of level two balcony floor and wall above the level one roof.



WALL MATERIALS

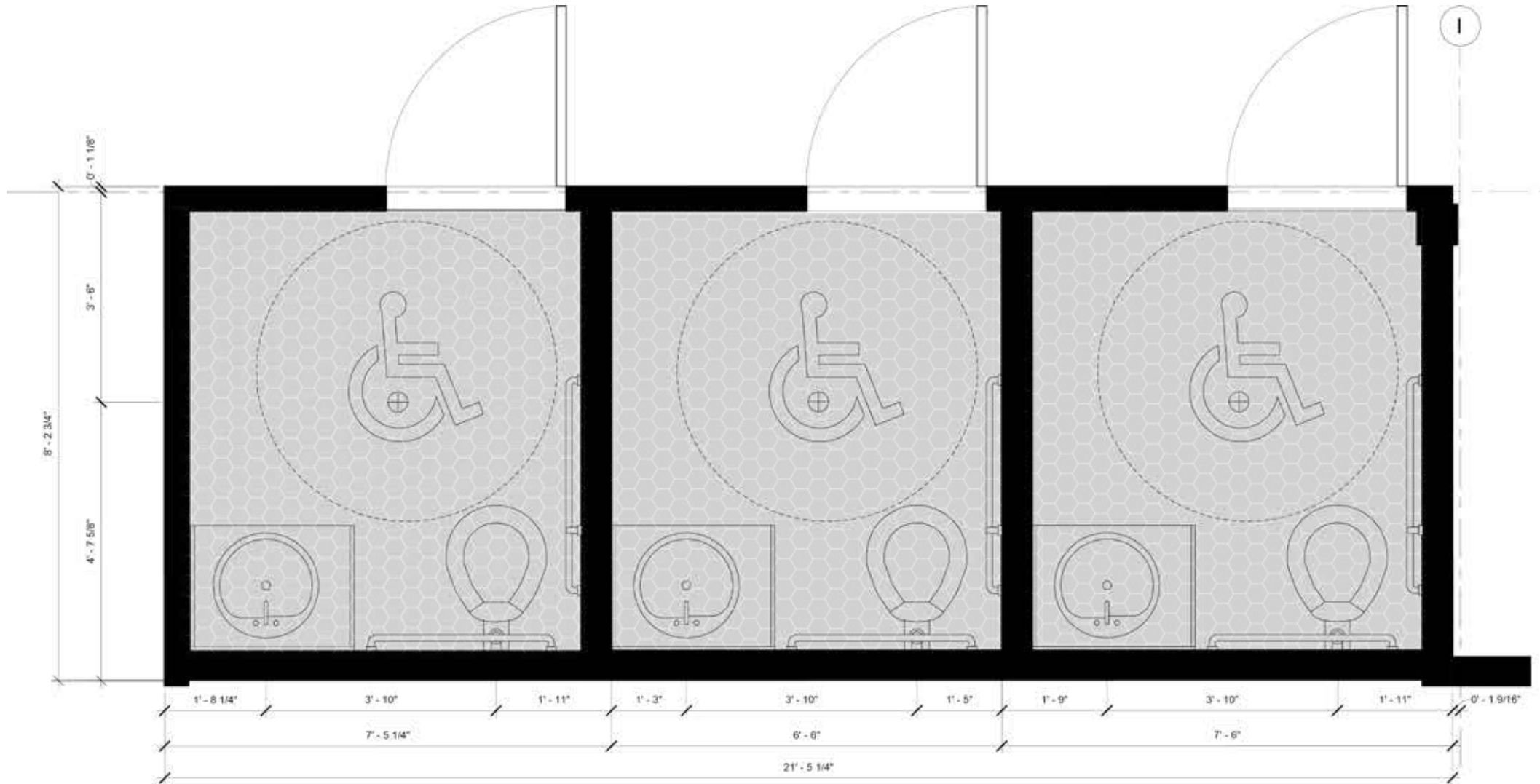
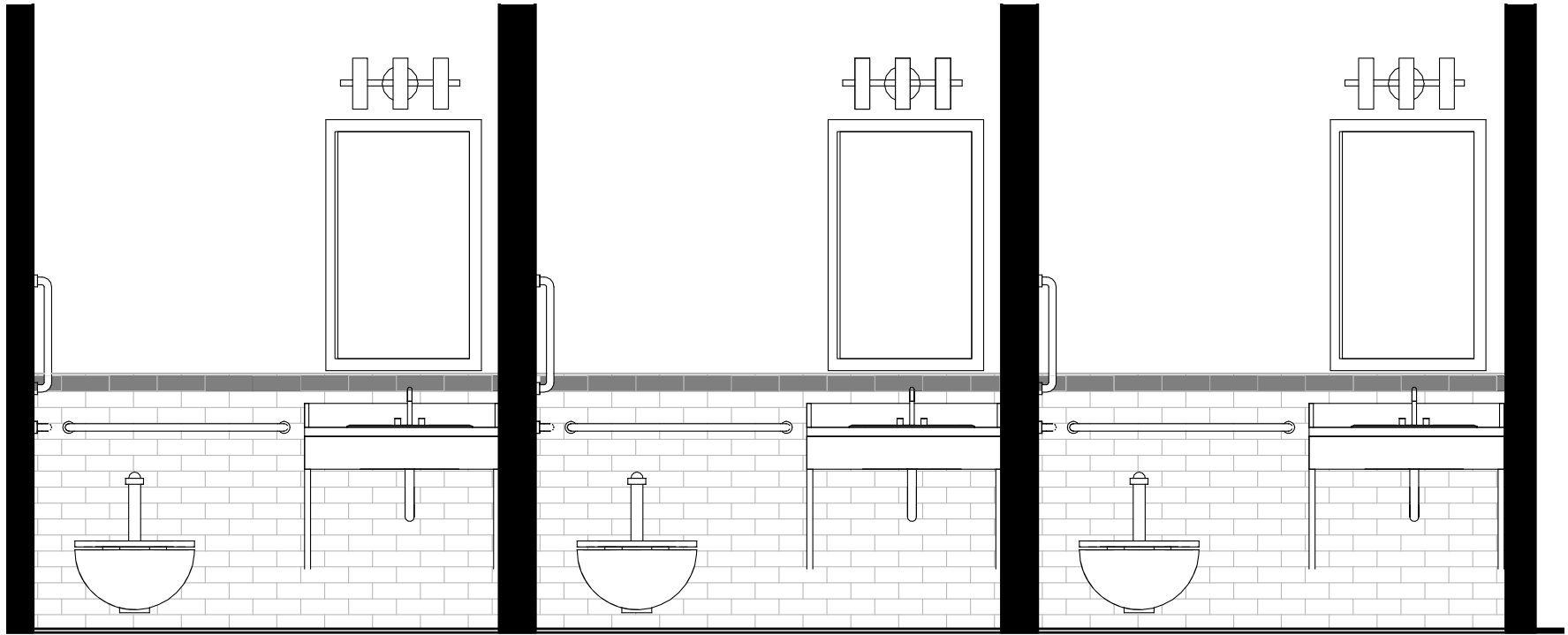
- 1 Supply Vent
- 2 Ceiling Ties to Deck
- 3 4" Duct
- 4 5/8" Gyp Board
- 5 5/8" Gyp Board Ceiling
- 6 Daikin Variable Refrigerant Flow System
- 7 Return Vent
- 8 Metal Cap
- 9 2" x 10" Cant with Shim
- 10 Air Barrier and Roof Membrane
- 11 Rigid Insulation
- 12 Heavy Timber Framing Members
- 13 Bamboo Siding

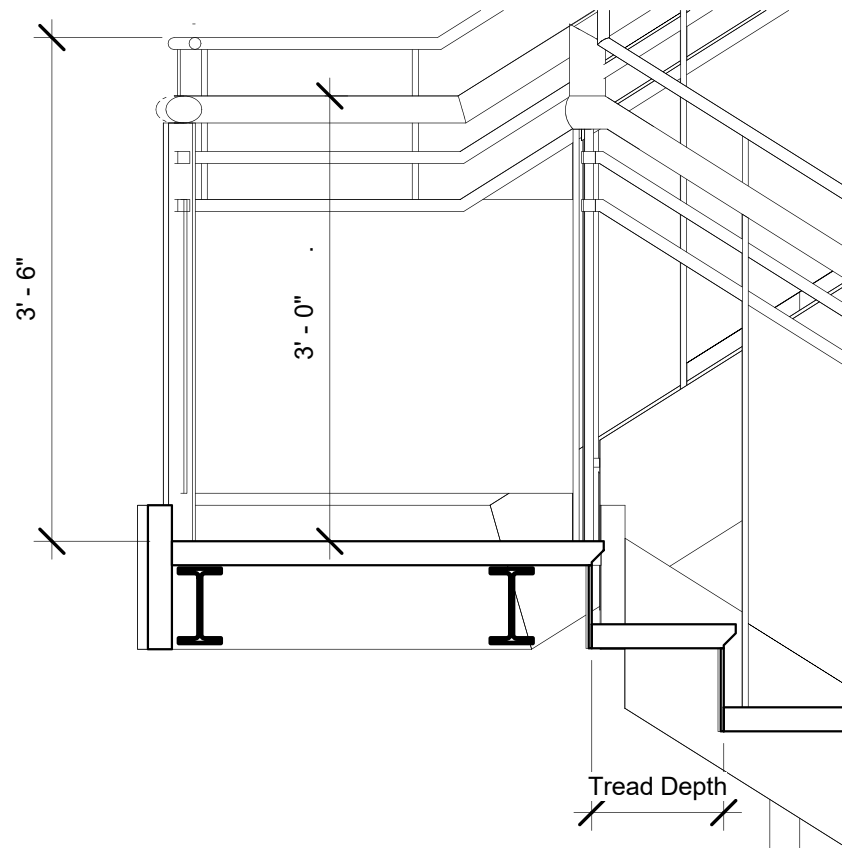
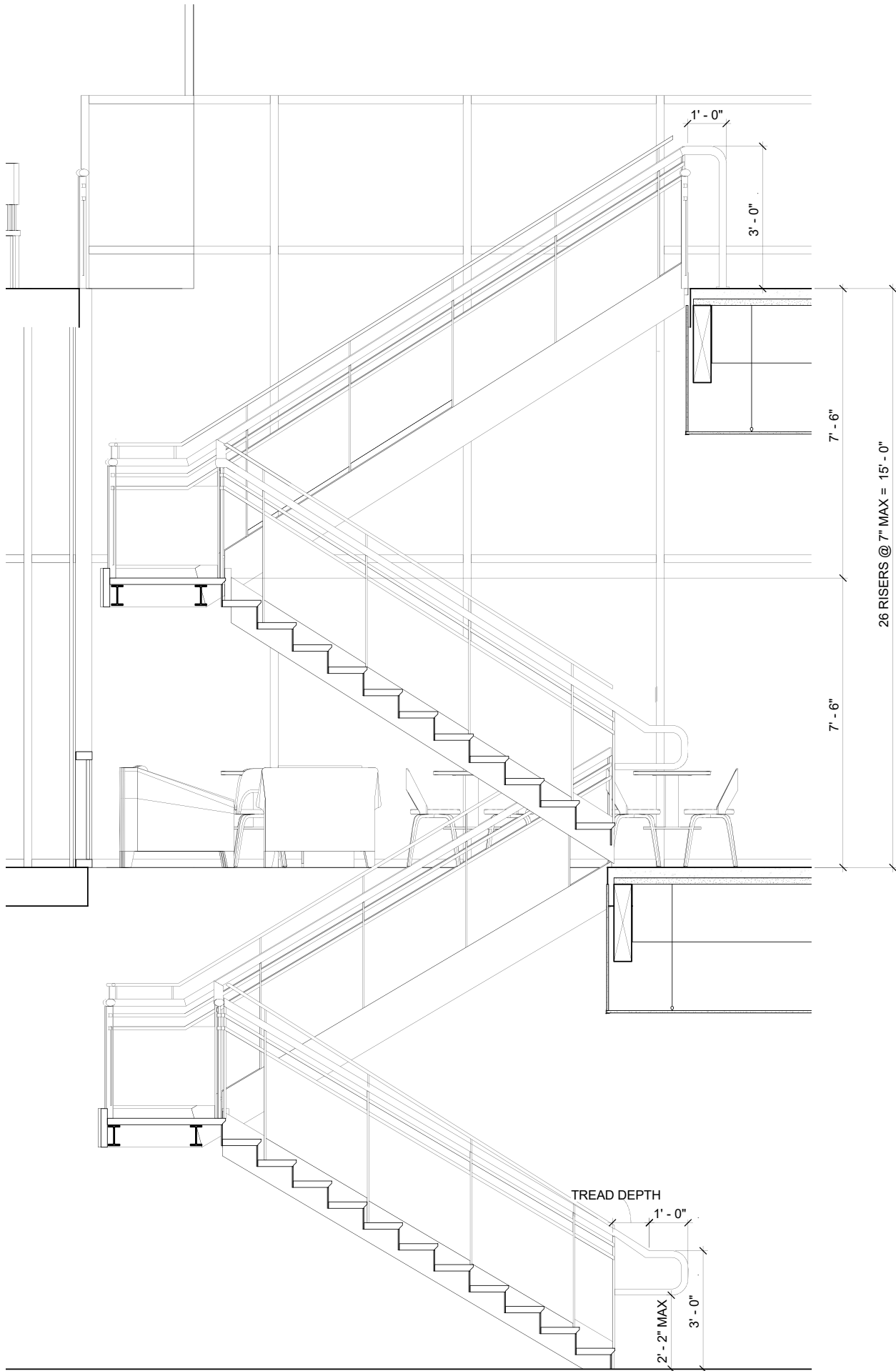
- 14 6" Cold Form Framing
- 15 Glass Panel Balcony Guardrail
- 16 5/8" Fiber Cement Board
- 17 4" Cold Form Metal Framing
- 18 1" Rigid Insulation on 1/2" Gypsum Sheathing
- 19 4" Z-Clips
- 20 Roof Drain
- 21 IPE Wood Tiles
- 22 Pedestal Paver Supprts
- 23 Vapor Barrier
- 24 5 1/2" Rigid Insulation
- 25 Concrete Topping Slab 2" Plywood Decking
- 26 Flashing



RESTROOM DETAILS

It's not an uncommon practice when designing and constructing homeless facilities that the cheapest or most inexpensive option for appliances and materials are selected. This is due to budget constraints or other schools of thought related to the users being more harsh on items than average and so on. For the long term cost of the building upkeep of the complex, selecting higher quality materials that have longer durability makes their ratio of cost over period of use lower. From a psychological perspective, making high quality spaces evokes dignity and improves self-esteem in the users journey of transformation.





STAIR DETAILS





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