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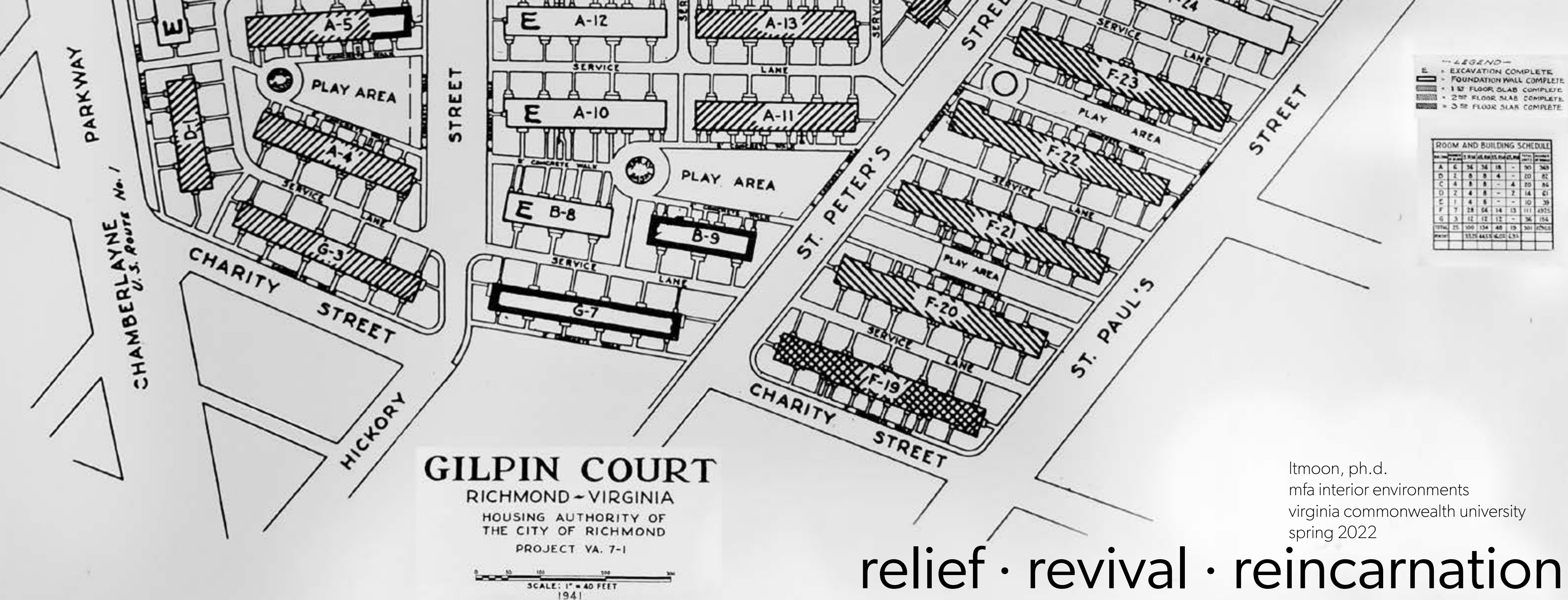
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Itmoon, ph.d.
 mfa interior environments
 virginia commonwealth university
 spring 2022

relief · revival · reincarnation

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photo credit: richmond times dispatch staff

acknowledgments

stepping onto a brand new path is difficult, but not more difficult than remaining in a situation which is not nurturing to the whole woman | maya angelou

thanks to all who contributed to making this path easier to navigate. thank you for your direction, support, encouragement, applause, knowledge, scholarship, nurturance, critique, vision, alternatives, and creative ideas.

you have served as a beacon when i could not find my way, provided companionship when i felt most isolated, and reassured me when i was most critical and doubtful.

my journey will always be influenced by what you shared...

i love each of you



photo credit: Itmoon, ph.d.

ethos

there is a complex connectivity people have with the built environment. this connection contributes to our sense of identity and belonging as well as creating the context for how we understand the world. as we assimilate to our surroundings, the impact of this connection becomes more subtle but is continually strengthened through our interactions.

interior design should ...

...promote social change, increase awareness, spark participation in social and political movements by disrupting the system while simultaneously evoking emotions, thoughts, and behavior because of that change.

...be developed with the community through participatory design, employing active collaboration, ethnography, and empathy, practices with cultural competence, sensitivity and an openness.

...understand the world from various perspectives.

...be accessible, inclusive, and equitable given its potential to empower, stabilize and contribute to the continuity of the broader community.



photo credit: Itmoon, ph.d.

introduction

abstract
project statement
evolution of public housing

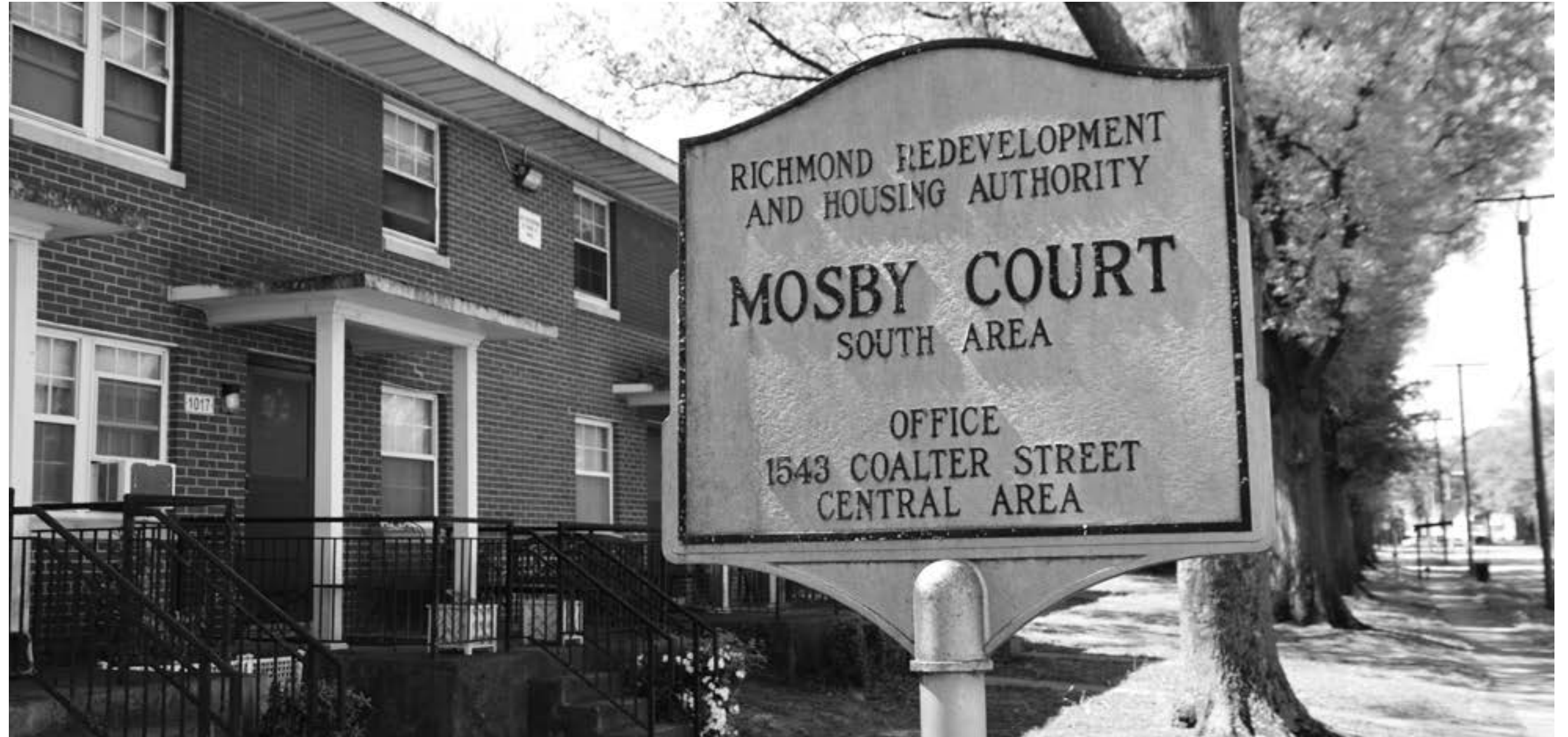


photo credit: Itmoon, ph.d.

abstract

there is a complex connectivity that we have with the built environment that goes beyond visual aesthetics and stimulates each of our senses. this connectivity is tied to our identity and the way we contextualize our experiences and our world. inspired by ethnographic observations, oscar newman's seminal work, + the pruitt-igoe documentary, the project seeks to study the elements of this connectivity or in some cases the reduced connectivity within a public housing residential environment.

what contributes to this reduced connectivity?

newman examined it from an architectural perspective, exterior elements of building, space designation, corridors, skip|stop elevator, circulation patterns, natural surveillance opportunities. other researchers (domestic + international) emphasized the importance of interior elements that contribute to a sense of belonging and ownership that include personalization, spatial layout, light, relational qualities between rooms, occupancy standards, and the spaces that support socialization.



photo credit: housing authority of the city of richmond annual report, 1940-1941

project statement

the project seeks to improve the livability of the interior environment in public housing residential units by emphasizing the design elements of light, dimensionality, circulatory liberation, balance and symmetry, relief, and spatial adaptability in the critical living areas, while preserving the historical context of the community.

designing beyond the provision of safe shelter, this project will illustrate participatory design in a public housing community, such that a renewed sense of choice, autonomy, ownership, and connectivity facilitates ownership and connectivity for a group whose housing opportunities have been limited by race and economics.

if the livability of the interior space is prioritized through design elements, can a renewed sense of ownership and connectivity to the space occur?



photo credit: Itmoon, ph.d.

evolution of public housing

introduction

Public housing is a federally funded program designed to address the housing needs of low-income families that live 20% or more below the poverty line. It originated from a host of multidisciplinary foci that include social reformation, urban planning, economic stimulus, public safety/sanitary living conditions,

and politics. However, despite its 80-year existence, reaching consensus regarding the impact and the underlying agenda continues to be widely and publicly debated. More importantly, whether full consideration was given to the long-term effects on the existing community and its residents remains to be determined. Many argue that the design had paradoxical effects

such as increased marginalization, isolation, and segregation, while others suggest that the intended effects were achieved (Mayor's Anti-Poverty Commission Report, 2013).

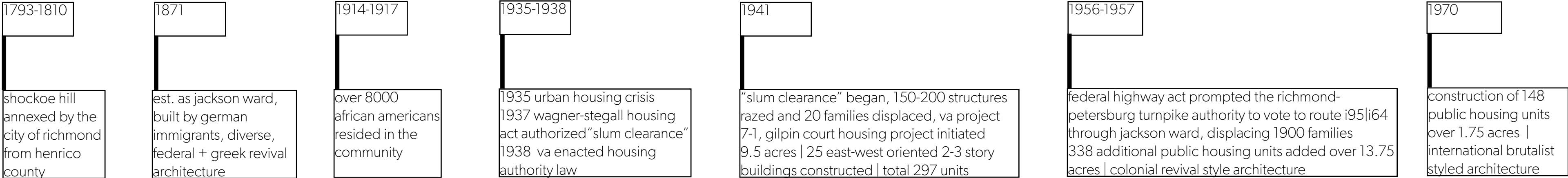
Specifically prompted by the Wagner-Steagall Act of 1937, the U.S. public housing program was a political response to the urban housing crisis, which was a

consequence of the surge in urban growth occurring across the nation. The housing crisis was particularly referencing not only the shortage of housing stock but more critically the unsafe and unsanitary housing conditions that were jeopardizing the health, wellness, and morals of the nation's citizens.

The Act states that,

"It is the policy of the United States (1) to promote the general welfare of the Nation by employing its funds and credit ... (A) to assist several States and political subdivisions of States to alleviate present and recurring unemployment and remedy the unsafe housing conditions and the acute shortage of decent, safe, and sanitary dwellings for families of low-income, in rural or urban communities, that are injurious to the health, safety, and morals of the citizens of the nation; [and] (B) to assist States and political subdivisions of States to address the shortage of housing affordable to families of low-income..." excerpt Wagner-Steagall Act 1937

historical timeline



At the core of the Act was stipulation that required municipalities to employ a one-to-one ratio of development to clearance. The policy mandated that for each public housing unit developed there would be one unit of blighted property razed (Wagner-Steagall Act of 1937). Interestingly, this clause addressed the quality of the housing stock; it did not address the amount of housing stock available, which contradicts the intended purpose of the federal policy. The Act specified significantly low-income eligibility requirements which ensured that neighborhood composition would be large pockets of concentrated poverty while avoiding competition with the private housing industry. Segregation by race and class was explicitly stated in the federal housing policy and while logistical and planning decisions were left to states and municipalities, the comprehensive federal policy significantly dictated which properties were eligible and selected for clearance and

eventual development (Wright, 1981; Fair Housing Center of Greater Boston, 2020). The systemic and institutionalized racial inequities largely contributed to the economic prosperity of communities of color, which consequently meant that communities of color were repeatedly deemed “slums” and chosen for demolition across the country. This also meant that public housing developments were intentionally excluded from predominantly white communities. A current survey of public housing stock illustrates that they are “disproportionately located in areas that have high rates of poverty, are racially segregated and have significantly low public and private economic investment” (Fischer, Acosta, & Bailey, 2021). Amendments to this federal legislative act were the U.S. Housing Act of 1949, the U.S. Housing Act of 1959 (Public Law 86-372), the Housing & Community Development Act of 1974, and the Quality Housing



photo credit: Itmoon, ph.d.

and Work Responsibility Act of 1998 which continued to fund “slum clearance” initiatives and other federally sanctioned urban renewal programs, Section 8 housing, and multiple housing redevelopment and revitalization initiatives (i.e., Rental Assistance Demonstration | RAD, HOPE IV, home ownership model for Section 8, Choice Neighborhood Initiatives | CNI).

Just as the federal policy indicated, it was intended to facilitate development, regeneration and improvement in metropolitan areas which included the (1) removal of blighted and deteriorated properties by replacement, rehabilitation, or conservation, (2) stimulate economic growth, (3) remediate social maladies, and (4) expand municipal services (Community Renewal Program, 1966).

The Virginia Housing Authority Law of 1938 declared:

“... (a) the clearance, replanning and reconstruction of the areas in which unsanitary or unsafe housing conditions exist and the providing of safe and sanitary dwelling accommodations for persons of low income are public uses and purposes for which public money may be spent, and private property acquired and are governmental functions of grave concern to the Commonwealth; (b) that it is in the public interest that work on projects for such purposes be commenced as soon as possible in order to relieve unemployment, and the necessity in the public interest for the provisions hereafter enacted, is hereby declared as a matter of legislative determination.”

excerpt Virginia Housing Authority Law 1938

According to the Housing Authority of the City of Richmond Annual Report 1940-1941, demolition of acres of homes began in 1941, a total of 220+ families were impacted, and 150-200 structures (brick 10%, frame 90%, unsafe 85%, inside toilets 18%, owners 30%, tenants 70%) were razed. Many of the houses were 50+ years old, one/two story in height and were either brick (10%) or frame (90%) construction. None of the homes had alleys and only 18% had interior plumbing even though most homes in Richmond had alleys and indoor plumbing. Seventy percent of the neighborhood were tenants and the remaining 30% were homeowners (City of Richmond Annual Report, 1941).

The establishment of Gilpin Court Housing Project, the first in the Commonwealth of Virginia, was developed immediately with segregated sections for residents. Constructed in 1942, it contained 783 housing units in 25 residential buildings across 9.6 acres in North Jackson Ward. An extension

of 30 buildings was built in 1957 that encompassed an additional 13.75 acres. Presently, there are total of 95 residential buildings. Today, over the next three decades urban renewal efforts continued and resulted in the demolition of African American neighborhoods that include Fulton, Carver, and Navy Hill and the development of other public housing communities that include but were not limited to, Hillside, Mosby, Whitcomb, Creighton, Fairfield, and Dove Courts (see Table 1).

The City of Richmond, Community Renewal Program Report (1966) suggested that the primary goal of its renewal initiatives was the continued removal of blighted properties, which was believed to significantly jeopardize economic development as well as the character and values of the city itself.

In this case, legislative Code of Virginia defined slum and blight as,

“areas with buildings that were dilapidated, obsolete, overcrowded, faulty in design or arrangement, poorly ventilated, poorly lit, lacked sanitary facilities, or had any combination of these factors that were detrimental to the safety, health and morals or welfare of the community.”

excerpt Code of Virginia, Title 36-Housing: Chapter 1 , 1959)

Using these parameters, the Commonwealth of Virginia legally (1) authorized the continued removal of large swaths of homes/neighborhoods that were either deemed to be “slum” or were deteriorating and at risk of becoming blighted, and (2) established municipally-specific public housing authorities that would be responsible for the development of public housing communities. These same initiatives were implemented across the state, which includes but is not limited to the cities of Petersburg, Hopewell, Norfolk, Hampton, Newport News, Roanoke, and Danville.

From an urban planning and economic perspective, public housing was contextualized as an opportunity to prompt community renewal initiatives that would simultaneously address the surge in urban growth as well as the resulting problems while also stimulating economic growth and advancing municipal development. From a sociological perspective, it was contextualized as humanitarian and beneficent, intended to elevate the physical and environmental surroundings of historically disenfranchised and economically impoverished communities that were displaced by renewal efforts. Jacobs (1961) contended that the urban renewal movement sacrificed the needs of city residents to advance an economic and social agenda and her assessment suggests a certain degree of accuracy as the nationwide

Table 1

HOUSING DEVELOPMENT	YEAR BUILT	TOTAL DWELLING UNITS	# OF BLDGS	# OF ACRES
Gilpin Court	1942 1957 1970	783	93	25
Hillside Court	1952	402	68	30
Creighton Court	1952	504	85	40
Whitcomb Court	1958	447	77	34
Fairfield Court	1958	447	84	35
Mosby Court	1962 1970	458	106	56
Dove Court	1968 1970	60	razed	2008
Blackwell	1968	440	razed	1999-2001

photo credit: richmond redevelopment and housing authority , 1970

project had universal and far-reaching results for both metropolitan and rural communities.

design

The government outlined regulations and specifications for the construction of public housing. Published annually, the Federal Housing Administration’s Minimum Property Standards (MPS) for One or Two Living Units and Minimum

Property Standards for Three or More Living Units was drafted to ensure compliance with residential safety and health requirements, encourage the improvement of housing conditions, and define minimally acceptable design and construction parameters so that the integrity of the housing structure would maintain its utility and durability (FHA, 1958; HUD, 1994). These regulatory guidelines were based on the recommendations of

“builders, architects, engineers, and material producers” (p. vii; FHA, 1958) and were not intended to serve as building codes, but served to establish clear specifications for planning, property development, construction methods, architecture, structural dimensions, interior room sizes, exterior/interior materiality, finishes, and unit costs. These congressional guidelines were significantly influenced by the government’s determination

to “uplift” the morals of the economically less fortunate, the universal design remained stark, utilitarian and without significant attention to the qualitative importance of the interior environment. Spearheaded by Virginia’s Senator Harry F. Byrd, Sr., the specifications stipulated that “elaborate or expensive designs and materials” were prohibited and costs on average could not exceed

\$4000 per family unit or \$1000 per room (Friedman, 1967; Wright, 1981).

Although the standards were only intended to serve as minimal guidelines across the nation, the same model was adopted and has become suggestive of an architectural typology (Pinnock, 2021). Pinnock (2021) notes that there is a such a significant

degree of uniformity in public housing design that regardless of geographic location, the recognition of “public housing” architecture can be identified. Psychologically, society has come to associate specific architectural features and neighborhood characteristics (i.e., Lynch’s paths, nodes, edges, districts, landmarks) to public housing communities, which includes pejorative references

and vernacular characterizations (i.e., ghetto, slum, projects, violent, drug-infested, black, poor) and perpetually reinforces the way we see and interpret public housing (Pinnock, 2021). In this way, the architectural design has perpetuated punitiveness, stigmatization and ostracization of the public housing residents for close to a century now, and due to the programmatic scale the impacts of this built environment

have continued to be exponential at the micro and macro levels.

Referred to as an imposed design approach, the predominant public housing architectural design was conceived without input from residents and subsequent emphasis on quantitative elements (i.e., architectural, engineering, economics) were prioritized. The resulting design served as an

outward expression of the broader societal values and political beliefs of those who created it. Ebo (2021) suggests that “the coordinated efforts of architects, designers, policy makers, developers, bankers, and others have used their power and authority to encode spatial and visual articulations of the built environment within communities that have been disenfranchised by majority.”

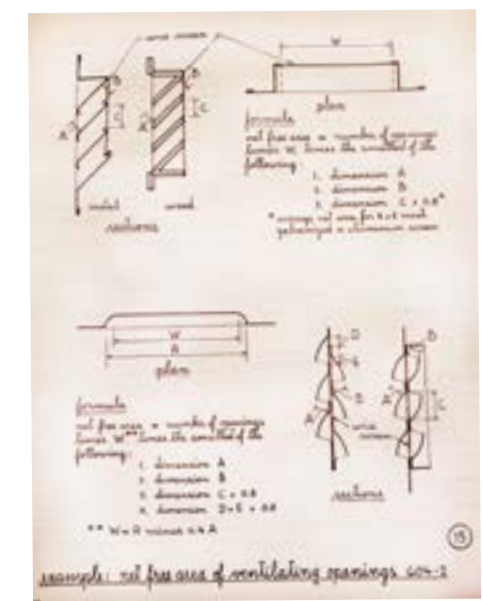
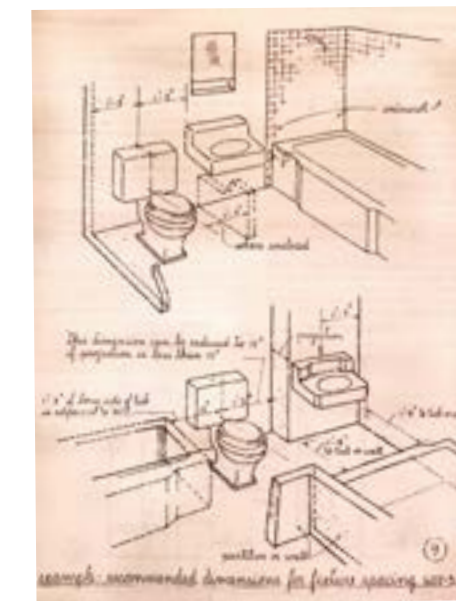
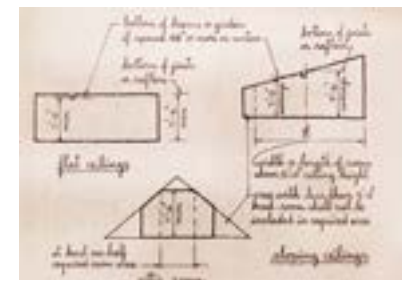
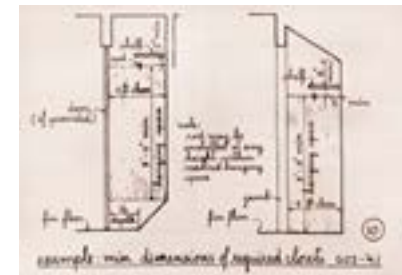
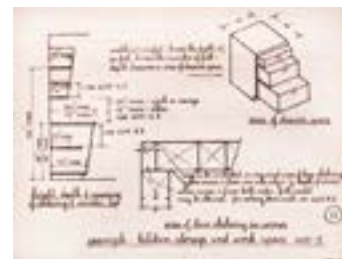
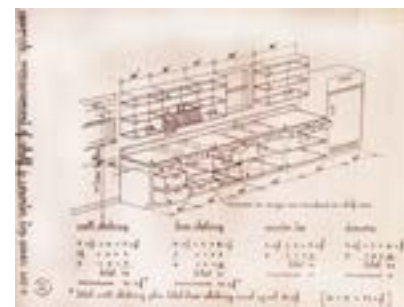
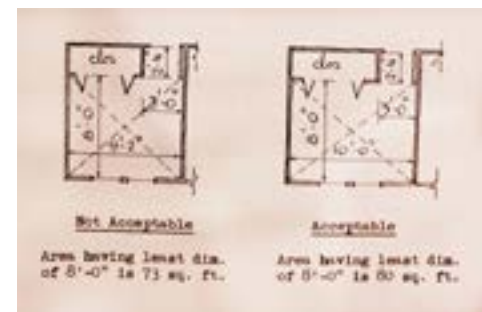
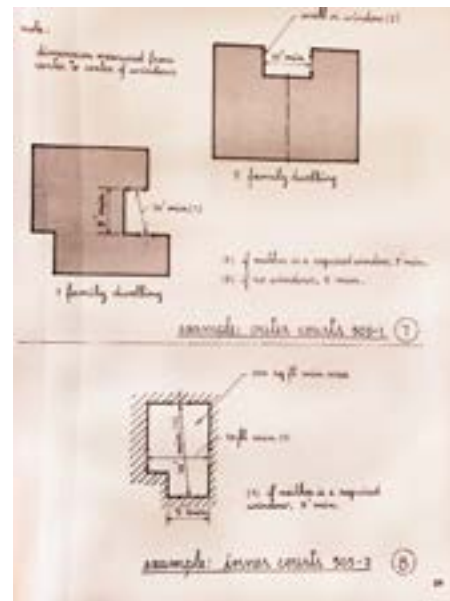


photo credit: federal housing administration, 1958

Public housing design provides a striking example of this.

In Richmond, many of the first public housing structures still exist today. The first public housing community, Gilpin Court, contains both historic and redeveloped structures. Built in 1941, the oldest apartments are 80 years old and, in most cases, have undergone modest rather than structural updates. In some cases, the buildings were intended to appear “visibly permanent”, to show taxpayers how their money was being used (Wright, 1981). The exterior façade of Richmond’s historic public housing buildings was designed to be industrial, monolithic, and dense. Using a grid court/semi-court design where the open areas are surrounded by clusters of other residential buildings and limited street access to the front door, the structures are proximally close with an overabundance of exterior communal and public spaces which minimize privacy and

diminish individual responsibility for the space. Each community has a series of one-, two-, three-, four- and five-bedroom apartments, however, to encourage impermanence/transience, the units were unusually sparse and unadorned (Wright, 1981). Typical 3-bedroom apartments were just under 800 square feet while the 4-bedroom units are just over 1000 square feet. Owner bedroom dimensions ranged from 123-163 square feet and according to Wright (1981) this was intended to discourage room sharing with infants and small children. Storage space was significantly limited and was not large enough to accommodate items such as bicycles, luggage, or other bulky items. There were no closet doors as this was not only considered a luxury but also intended to encourage good housekeeping habits (Wright, 1981). Park (2018) suggested that the model of public housing was paternalistic and makes a

unilateral presumption that lower socioeconomic classes need authority to regulate and guide decisions and behaviors, they are less equipped to know what they need in their own residential environments. This model greatly informed the architectural design solutions generated for marginalized communities living in substandard housing. Each community overemphasized enclosed spaces and over time became intentionally inaccessible and psychologically impermeable for the residents to leave. Simultaneously being overly vulnerable to victimization (Newman, 1973). For over a quarter of a century, the edges of the public housing community have become more defined and demarcated, reinforcing the isolation such that the communities are impenetrable and compressed with few opportunities for relief.

conclusion

Research suggests that universally, residential design models are highly influenced by cultural, social, and political worldviews. Public housing design is not exempt. An examination of the research suggests public housing residential design historically prioritized the physical construction of the built environment, sacrificed the livability of the interior space, minimized the articulated form of the interior space, and placed less focus on the occupiers of the space.

This is supported by the literature. Specifically, researchers note that significantly less emphasis was placed on the qualitative importance of the interior environment. As the idea of residential livability for the economically less fortunate was conceptually minimized to the provision of basic shelter (Rainwater, 1966), the program intentionally gave little consideration

to cultural relevance, space planning, materiality, aesthetics, and functionality. However, research suggested that these latter elements are equal to and in some cases exceed the importance of the building shell (Roger, 2005; Pader, 2016; Hadjiyanni, 2007; Hertzberger, 2009).

Research also suggests that regardless of the economic status of the occupant, the quality of the interior environment also increases the sense of residential ownership, increased responsibility and protectiveness of the one’s space, much of which contributes to a safe, vibrant and healthy community.

Because the public housing design model has roots in the federal government, the universality of these issues is pervasive across the nation, affecting over 4 million people and 2.5 million households, which are managed by 3300 public housing authorities (HUD,

2021). The Commonwealth of Virginia is not exempt and urban renewal programming is considered comprehensive and ongoing.

The imposed design approach and limited collaboration between architects and interior designers has perpetuated this problem such that some redevelopment efforts have resulted in repeated public housing design failures and continued misalignment of critical design priorities.



photo credit: Itmoon, ph.d.

precedent studies

herman hertzberger | diagoon house

alejandro ravena | monterrey, half house

anne lacaton and jean-phillipe vassal | tour bois le pretre



photo credit: richmond times dispatch, staff

diagoon dwelling, delft

herman hertzberger

project: diagoon dwelling, delft

location: vassen, netherlands

date: 1967-1970

reason selected: programming , polyvalence concept, residential identity



Herman Hertzberger (1973) shared the deleterious effects of imposed design practices, that includes sense of estrangement towards the design, and a reduced likelihood to assume responsibility or maintain the care of the designed structure. Hertzberger suggested that design should reflect the identity of community residents such that they are motivated and empowered to care for that which does not 'belong' to them. He proposed the Diagoon Dwelling, which was a prototypical social housing model that was based on the concept of "polyvalence". The design was intentionally incomplete and had multi-functional spaces which allowed the end user to customize space based on family and individual needs. Whitehead (2021) suggests that when the designed structures are defined for people, they will accept it "as is" and are less likely to assume they have permission to engage in the space, form, or the landscape. Marginalized groups are particularly vulnerable to the influences of imposed design given the fact that choices are consistently limited by policy, regulations, and economics, and are therefore less likely to feel empowered to shape their own residential environments. Polyvalent design has the potential to create greater autonomy and a sense of ownership among residents.

5 basic considerations for polyvalent design |

size of room, larger the room the more space to consider multipurpose | number of large rooms

underlying spatial structure of the building | relationship between rooms

relationship of space to rooms with fixed activities | fluid boundaries

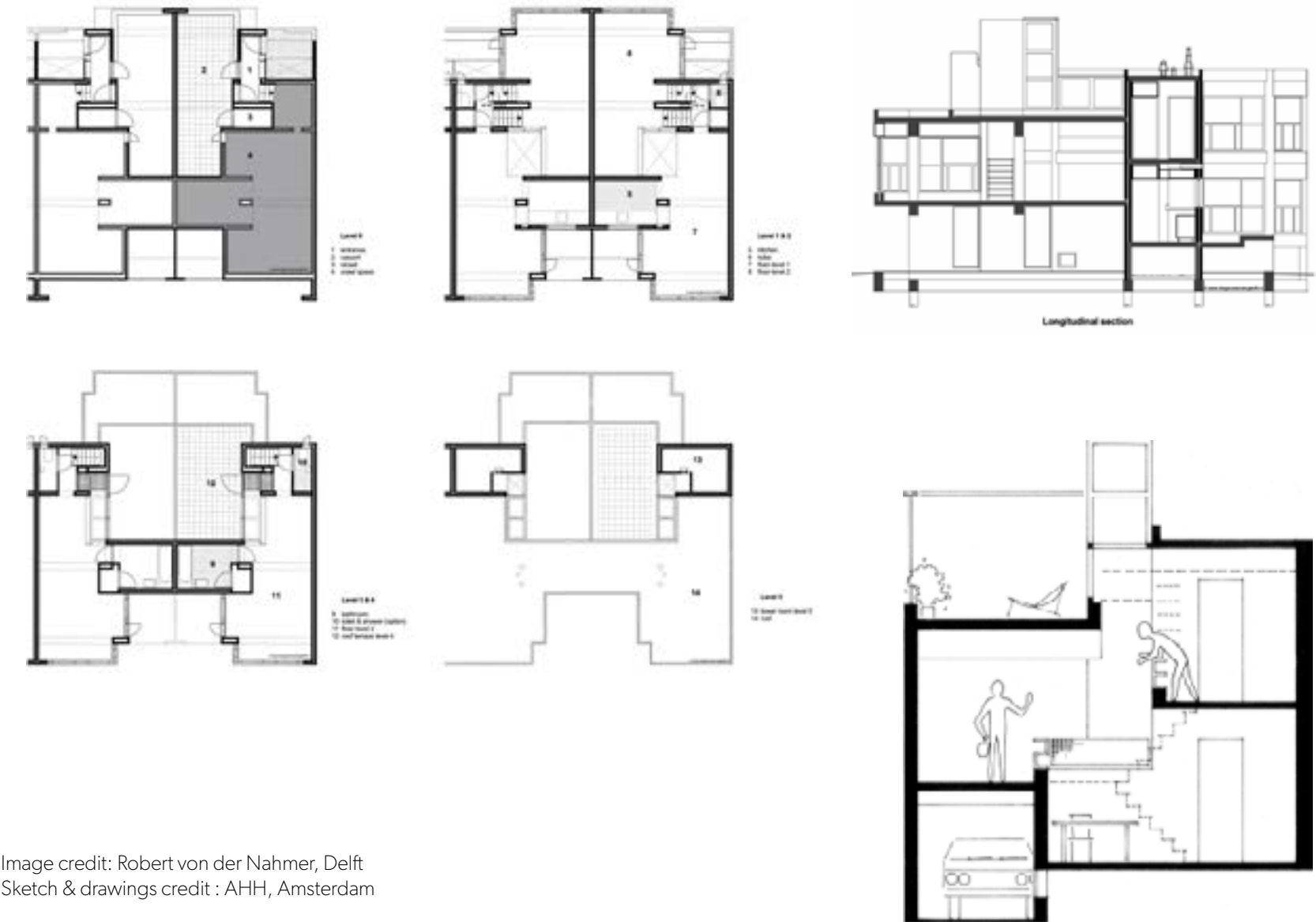


Image credit: Robert von der Nahmer, Delft
Sketch & drawings credit : AHH, Amsterdam

monterrey, half house alejandra aravena



project: monterrey, half house

location: monterrey, mexico city

date: 2008-2010

reason selected: programming, incrementality concept, collaborative use of resources

The high prices of housing in Mexico make it very difficult for low-income families to have access to an adequate dwelling. Aravena articulates three foundational principles (i.e., ABC's) for social housing which include (A) provide what is most difficult, (B) provide what cannot be done individually, and (C) provide what will promote the long term, best interest of the community. Rather than designing simply for shelter, the essential features of Aravena's model include designing towards "middle-class dna" which means that the dwelling comes equipped with basic essentials (i.e., A & B) adequate square footage or minimum of 4 bedrooms with space for a closet and double bed, bathrooms need to be close to the bedrooms and include a tub, a kitchen, structural partitions and firewalls, stairs, a roof, a space for a washing machine, and a place a for vehicle. Families can gradually and incrementally expand their homes according to their needs and budget.

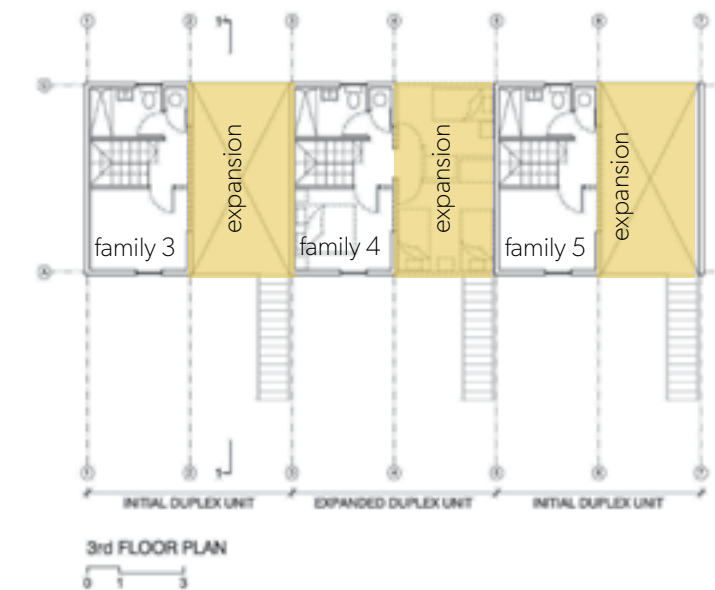
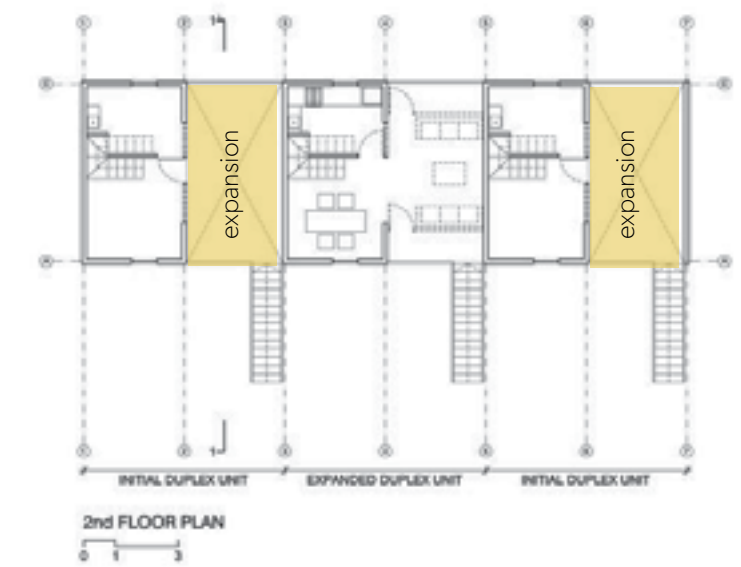
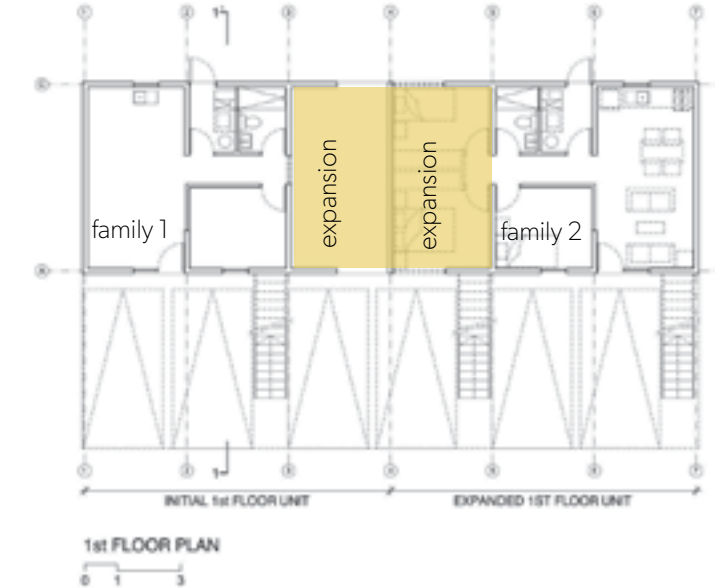


Image credit: Ramiro Ramirez,
Plan credit: Elementalchile.cl/en

tour bois le pretre anne lacaton jean-phillipe vassal

project: Cite du Grand Parc Complex

location: Bordeaux, France

date: 2016

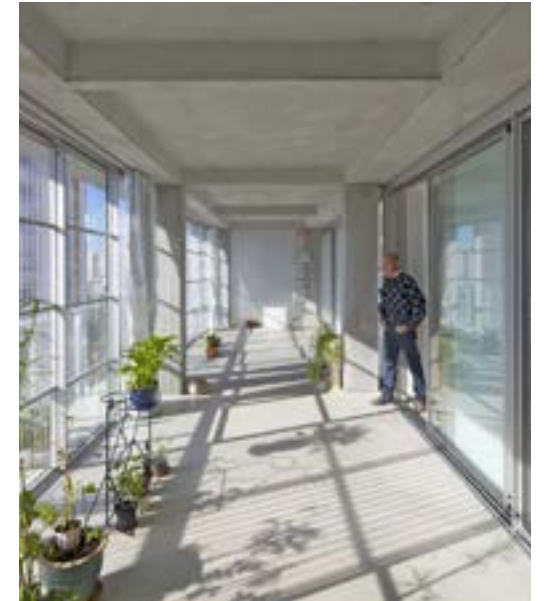
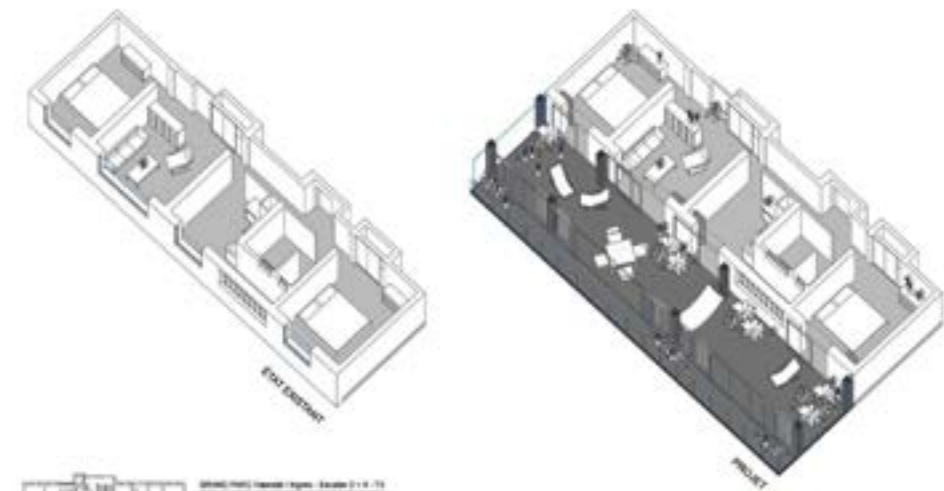
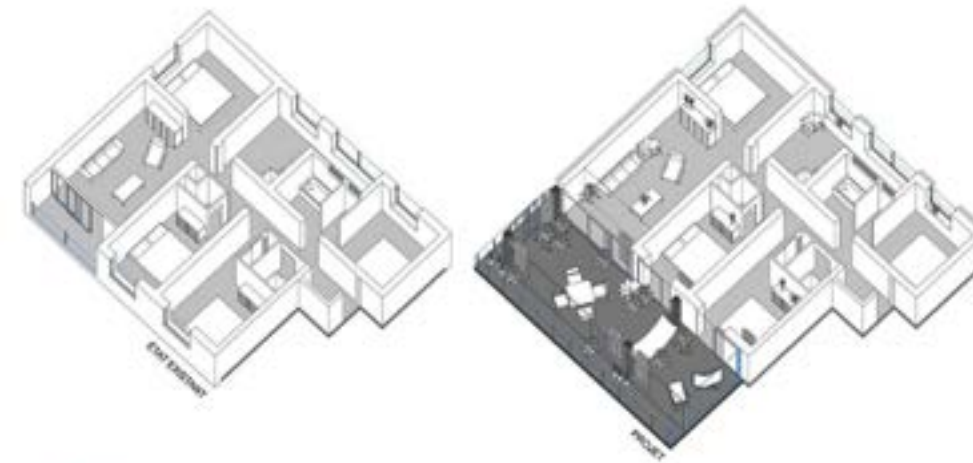
additional designers: Frederic Druot, Christophe Hutin

reason selected: sustainability + programming , "never demolish ethos"- by preserving existing structure



This project involved revitalizing 530 apartments situated across three multi-storied buildings. They incorporated a "never demolish" ethos and offer a design that preserves the existing structure and avoids the initiation of new construction. The approach reduces the carbon footprint. The apartment complexes were originally concrete facades. Lacaton and Vassal changed the building envelope and increased residential views by adding south facing balconies and conservatories to each dwelling. This also increased the private living space by about 40 square feet while also improving air circulation, light, and spatial openness. Existing windows were upgraded to sliding glass doors so that residents could access the "winter garden" area as well as balcony. This space served as an extension of the home. The strategies improve the livability of the dwelling through revitalization.

Image credit: Phillippe Ruault
Drawing credit: Lacaton & Vassal, Druot, and Hutin



site

district + neighborhood + building history
site analysis
building analysis
existing orthographics



photo credit: Itmoon, ph.d.

district + neighborhood + building history

history

The Jackson Ward neighborhood dates back almost 230 years. Initially known as Shockoe Hill, it was annexed by the City of Richmond from Henrico County between the years of 1793-1810 (Richmond Land Bank, 2020). Its unusual trapezoidal block street configurations are a unique characteristic of the neighborhood. The streets are named after biblical saints that include St. John, St. James, St. Paul, and St. Peter, and it quickly developed the name of "Apostle Town" (citation needed). On April 17, 1871, during Reconstruction, the neighborhood was established as Jackson Ward, one of 5 new political boundaries (i.e., Clay Ward, Jefferson Ward, Madison Ward, Marshall Ward and Monroe Ward).

The community was built by German immigrants and served as a commercial hub for the city.

The residential composition of the neighborhood was ethnically diverse and included immigrants of German, Jewish, English, and African (free and enslaved) descent. At the height of the Reconstruction and into the second Industrial Revolution period, the neighborhood transitioned, and the black residency increased. By World War I, the neighborhood was predominately African American, and by 1930 over 8000 African Americans resided in the Jackson Ward neighborhood (Richmond Land Bank, 2020). It was known as the entertainment and financial hub

for Richmond's African American community, characterized as the "Harlem of the South" and "Black Wall Street of Richmond", respectively.

The earliest architecture which dates between the 1830-1865 is representative of the Federal style and Greek Revival styles. As the neighborhood grew, architecture expanded to include the Italianate, Victorian, Mansard, and Queen Anne styles. Most homes were constructed as two-story, wood frame, wood-clad siding buildings. Unlike its southern brick structure counterpart, the homes in northern Jackson Ward were constructed with less expensive building materials

and did not have the decorative ornamental ironwork architectural features. Consistent with the Greek Revival architectural style, many were adorned with columns, cornices, spindle work, full porches, stone lintels and sills, bay and sashed windows, and various roof styles (hip, gabled, mansard).

Prompted by the Public Works Administration (1935), a nationwide urban housing crisis, and the subsequent the Wagner-Stegall Housing Act of 1937, a nationwide "slum clearance" initiative for dilapidated and unsanitary homes began and the institution of public housing projects was under way.

In 1938, the Commonwealth of Virginia enacted the Housing Authority Law of 1938, a legislative code that,

"declared: (a) the clearance, replanning and reconstruction of the areas in which unsanitary or unsafe housing conditions exist and the providing of safe and sanitary dwelling accommodations for persons of low income are public uses and purposes for which public money may be spent and private property acquired and are governmental functions of grave concern to the Commonwealth; (b) that it is in the public interest that work on projects for such purposes be commenced as soon as possible in order to relieve unemployment; and the necessity in the public interest for the provisions hereafter enacted, is hereby declare as a matter of legislative determination."

The Jackson Ward community was one of the first impacted, because within that same year the City of Richmond determined that the residences in the Jackson Ward neighborhood were old, blighted, unsanitary, inadequate and in disrepair. Specifically, the community met the parameters of the Commonwealth's legislative code Title 36, section 36-49, article 7, which defined slum and blight as,

“areas with buildings that were dilapidated, obsolete, overcrowded, faulty in design or arrangement, poorly ventilated, poorly lit, lacked sanitary facilities, or had any combination of these factors that were detrimental to the safety, health and morals or welfare of the community.”
(excerpt Code of Virginia, Title 36-Housing, 1959)

This authorized the Commonwealth of Virginia to legally (1) remove large swaths of homes and neighborhoods that were either deemed to be “slum” or were deteriorating and at risk of becoming blighted, and (2) establish municipally specific public housing authorities that would be responsible for the development of public housing communities.



GILPIN
PROJECT
BEFORE

photo credit: annual report
housing authority of richmond , 1940-1941

There are 16 original structures that remain standing in the community, 6 are habitable and appear occupied and the remaining 10 are currently in various states of disrepair. Former spaces where residences and businesses once stood remain vacant and there are three vacant lots that have imposing granite stairs and stone walls but no home.

Immediately following the demolition, the development of the Gilpin Court Housing Project began with segregated sections planned for white and black groups. Across 9 ½ acres, a total of 25 east-west oriented, 2- and 3-story buildings were constructed for a total of 297 housing units. The earliest structures were inspired by Colonial

Revival style architecture. These are orthogonal in plan with symmetrical facades and have adjacent double-hung windows, front gabled roofs, and centrally located doorways that provides access to the individual units.

Exterior running bond brick, brick and stone lintels, and mansard porch covers are common in all the buildings. Interior walls are constructed with concrete masonry units and concrete floors. The plan uses a grid court/semi-court design where the open areas are surrounded by clusters of other residential buildings and have limited street access to the front door.

The structures are proximally close with an overabundance of exterior communal and public spaces, which minimized privacy and exposed “normally hidden functions of daily living” (i.e., clothes lines, trash bins) into the courtyards and recreational spaces.

Prompted by the 1956 Federal Highway Act, the Richmond-Petersburg Turnpike Authority voted to route I-95 & I-64 through the Jackson Ward district in 1958. The interstate bisected the neighborhood and isolated the northern part of the community from its southern component which significantly reduced the commercial accessibility to downtown Richmond, demolished

the existing residential structures, and displaced over 1900 African American families from their homes. The interstate served as a major artery for the city of Richmond; however, its construction severed the Jackson Ward community. North Jackson Ward, as it now referred to, became increasingly more isolated and inaccessible economically, socially, and culturally.

In anticipation of this infrastructure project and pending displacement of families, additional public housing development occurred in 1957. The architectural design was replicated from the 1941 Colonial Revival building style. This development added 30 residential

buildings across 13 ¾ acres for a total of 338 housing units.

In 1970, an additional 148 units were added. The project design departed from the original Colonial Revival architectural style and was reminiscent of international, brutalist styled architecture. While the 2- and 3-story building structures continued to be symmetrical and rectilinear in plan, with east-west orientation, there was an emphasis on geometry and horizontal planes and less emphasis on ornamentation. The extensive use of brick, concrete slabs and concrete and metal overhanging eaves is evident throughout. The 3-story complexes have flat asphalt roofs while the 2-story structures

have front facing low pitched gable roofs. Given the dramatic overhanging metal and concrete eaves, the double hung windows appeared recessed. Private outdoor patio spaces were constructed for 3-story buildings, while the 2-story buildings were given private porches.

Baskervill & Son, Merrill C. Lee & Marcellus Wright of Richmond Virginia were responsible for the design of the housing project and Charles F. Gillette was responsible for the landscape architecture. With a total 93 buildings of 783 residential units, on 25 acres of land, Gilpin Court is considered the oldest and largest concentration of public housing in Virginia.

It has housed as many as 2100-2700 residents who have a median household annual income of \$9,375, significantly below the poverty line of \$15,000 (ACS; American Community Survey, 2020). At present, there are approximately 983 adults and almost 1200 children under 17 years of age (ACS, 2020). Most households are female headed and the community remains predominantly African American (97%; ACS, 2020).

North Jackson Ward's district is bordered by major infrastructure to the north, south, east, and west, resembling to an island within the city. Boundaries to the south are the convergence of two interstates (I95 and I64), while to the north is the CSX railroad (Chessie Seaboard). Boundaries to the east is N 5th Street and I64, and to the west is the convergence of two major state routes (Route 1 and Route 301).

The edges of the Gilpin Court neighborhood are E. Baker Street on the south, Calhoun Street, W. Hill Street, and the CSX railroad to the north, while to the east and west are N. 2nd Street and Route 1/Route 301, respectively. Within the community there are mature trees, stone walls, sidewalks, and boulders, landscape borders, and elevated mounds that are in front of the residential complexes. They serve as architectural barriers but are not decorative.



There are natural and walkable pathways between residential complexes as well as vehicular and pedestrian paths on streets throughout the community (i.e., N. 2nd Street, W. Federal Street, W. Charity Street, W. Coutts Street, W. Hill Street, W. Baker Street, E. Federal Street, E. Charity Street, E. Hill Street, E. Baker Street, Chamberlayne Avenue, Calhoun Street, Hickory Street, St. John Street, St James Street, St. Paul Street, St. Peter Street). There are three vehicular and pedestrian bridges that offer accessibility to neighboring communities. These include the 1st Street Bridge which runs northwest through the district, connecting the community to both northside Richmond and southeastern part of Jackson Ward and downtown Richmond. The Chamberlayne Parkway Bridge runs northeast through the district, connecting the community to the southwestern part of Jackson Ward, downtown Richmond, and northside Richmond. Public transit is available but is found on the perimeter of the community rather than being embedded in the community.

The community has a handful of conventional and non-conventional nodes. Conventional gathering typically occurs at the Calhoun Community Center, RRHA Main Office, St. Luke's' Building, Greater Mount Moriah Baptist Church, Friends Association for Children (Early Childhood Education Center), Frederick Fay Towers (11-story public housing elderly community) and one of the 4 corner stores that serve as a substitute for local markets/grocery stores (i.e., East Market Pizza -1st & E. Baker Street, Golden Eagle Convenience-N. 2nd Street & E. Preston Street, Tiger Market-E. Hill Street, Wally's Supermarket - St. John Street & W. Baker Street). Unconventionally, there is a series of outdoor community spaces where residents gather, visit, cook, eat, and fellowship. These spaces are defined by chairs, tables, crates, and stools. Located on vacant lots where homes once stood, a corner or a sidewalk, these spaces can be characterized as outdoor living rooms or "man caves" as one resident referenced. Weather permitting, there is often music, a game of dominoes, card playing, car washing/detailing, and socializing. Other non-conventional nodes are accessible corners and public transit bus stops, where residents will use the benches for congregating and socializing.



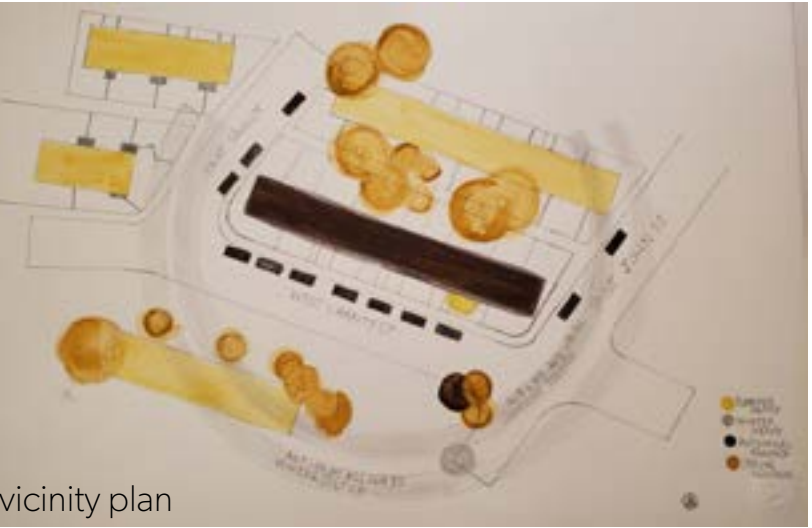
photo credit: richmond times dispatch, staff

site analysis

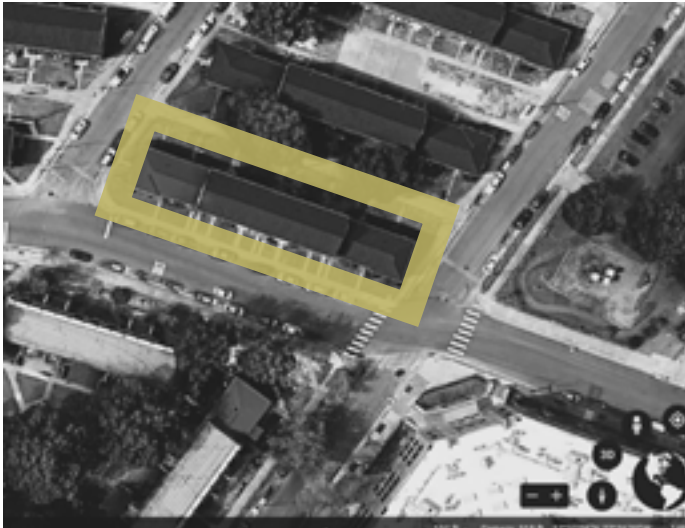
200-224 west charity street, richmond va 23220
gilpin court housing community, historic north jackson ward neighborhood
richmond redevelopment housing authority
va project 7-2, va project 7-3 (segregated projects)
constructed in 1941, colonial revival architectural style



east-west oriented 3-story building with a front gabled roof, and a central doorway for access to individual units
designed as a segregated community, baskervill & son was responsible for VA project 7-2 for “white residents” and merrill c. lee & marcellus wright architects was responsible for va project 7-3 for “negro residents”
landscape designed by charles f. gillette, landscape architect



vicinity plan





neighborhood plan

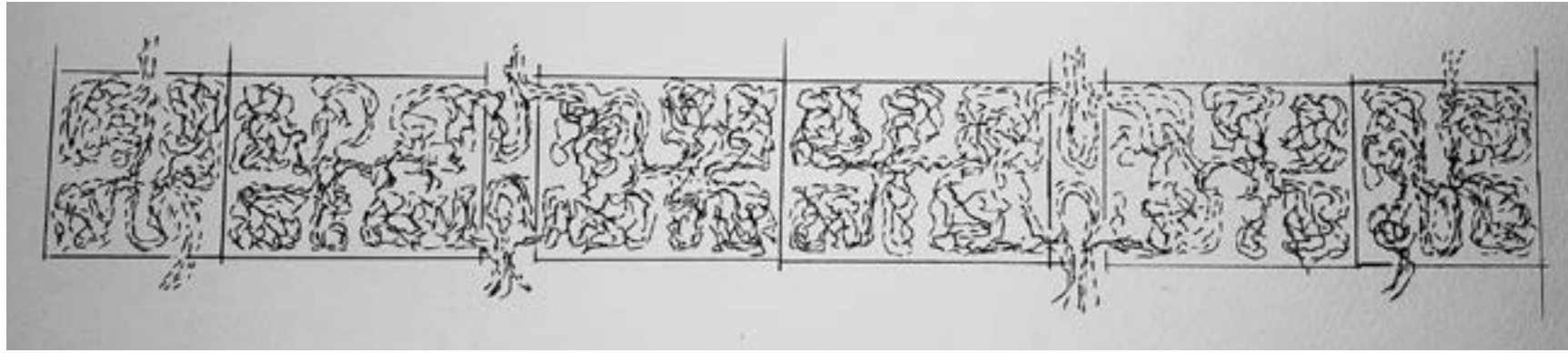
783 individual units contained in 93 residential buildings on 25 acres | neighborhood comprised of a series of trapezoid shaped blocks | adjacent to 2 major highways (i95 + i64) | 2 major state routes (route 1 | brook rd + route 301 | chamberlayne ave), csx railroad

visual + acoustic noise

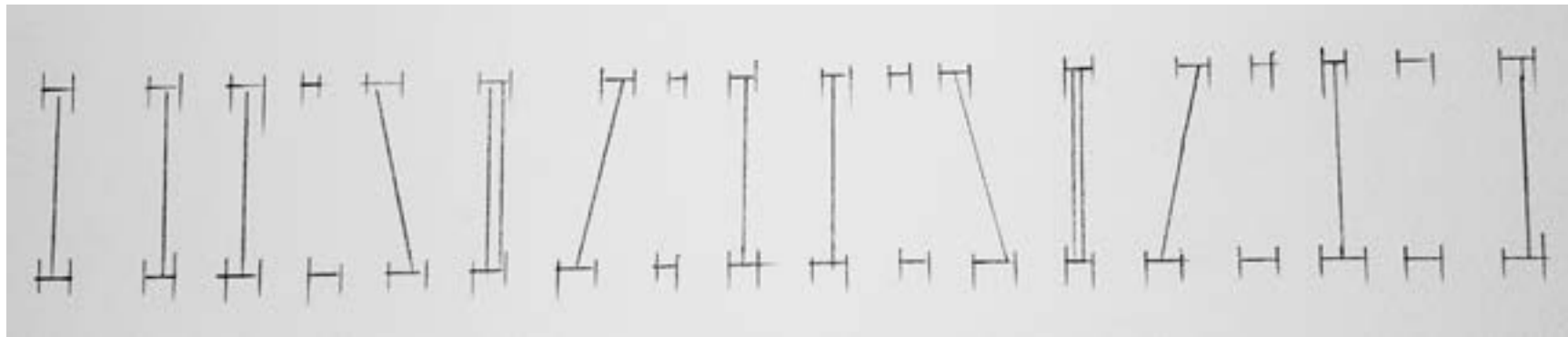
vehicular traffic from interstate and state highways | no architectural sound barriers | public transit through neighborhood (charity st, hill st, 1st st) | no alleyways | easements in the rear of residential buildings (implications for garbage disposal and receptacle collection at the front of units) | centralized mailboxes, overhead phone and electric lines | air conditioned units in windows | iconic clothesline poles in the rear of each residence | metal addresses, street names, "no trespassing" and "no smoking within 25 feet" signs affixed to the buildings | multiple nodes throughout the community - formal + informal



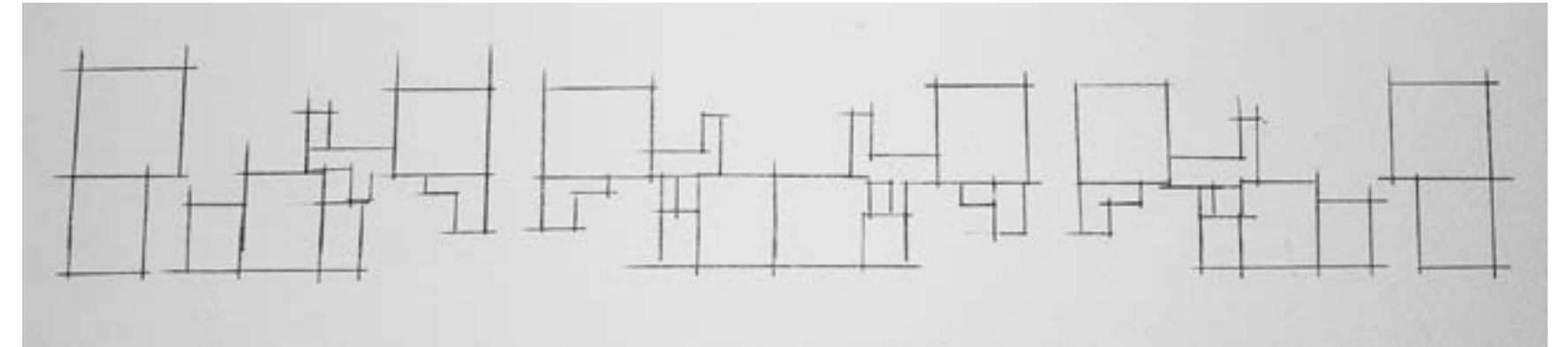
building analysis



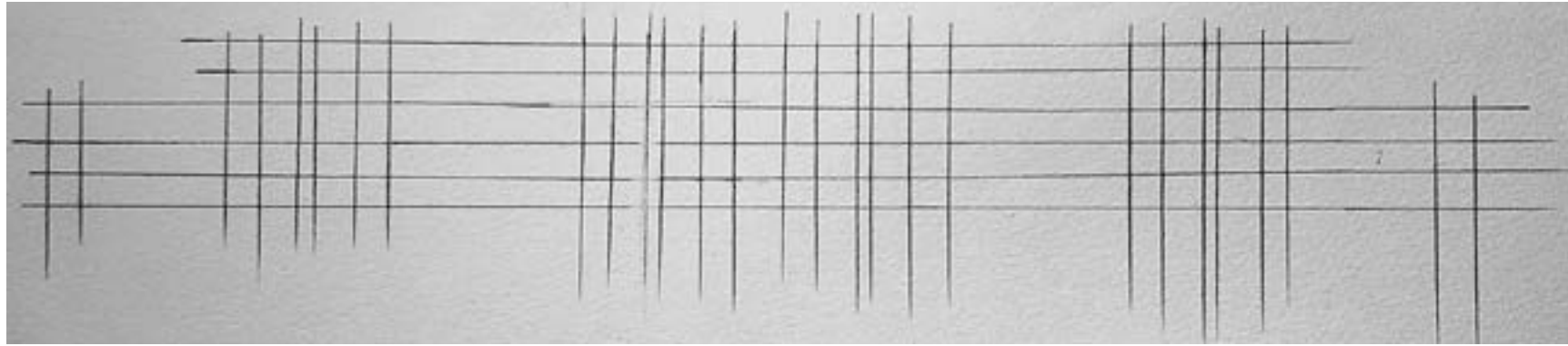
parti - circulation | dense circulation patterns within units which demonstrates the relationship between occupancy, spatial compression + enclosure without relief



parti - fenestrations | fenestrations parti suggests a limited number of small windows + doors, some misaligned which impede light and air circulation



parti - geometries | smaller square forms within a rectilinear form demonstrates spatial compression, limited spatial relief, architectural standardization and severe uniformity

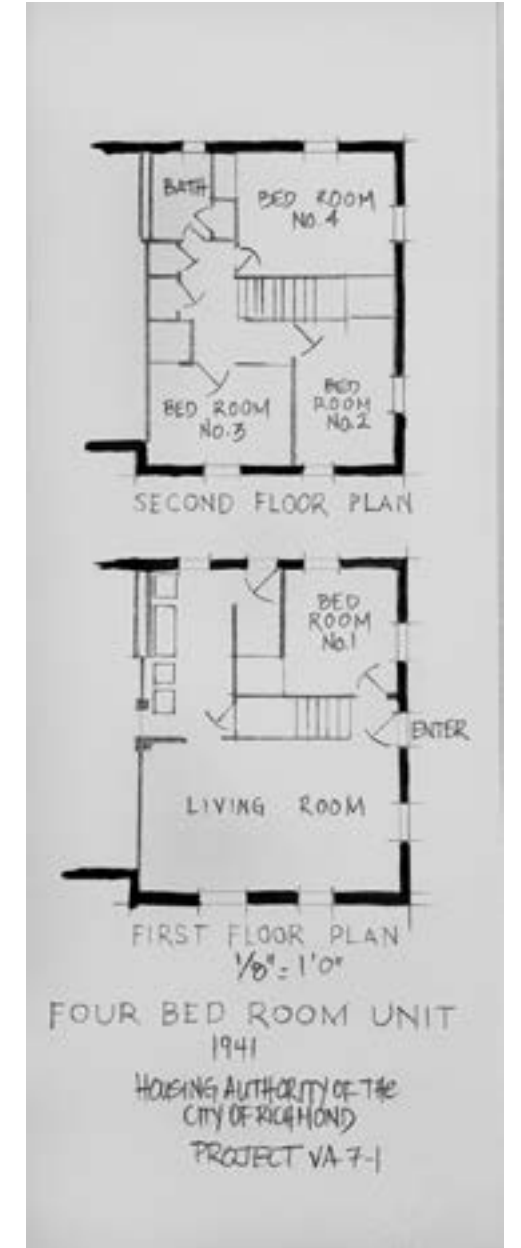
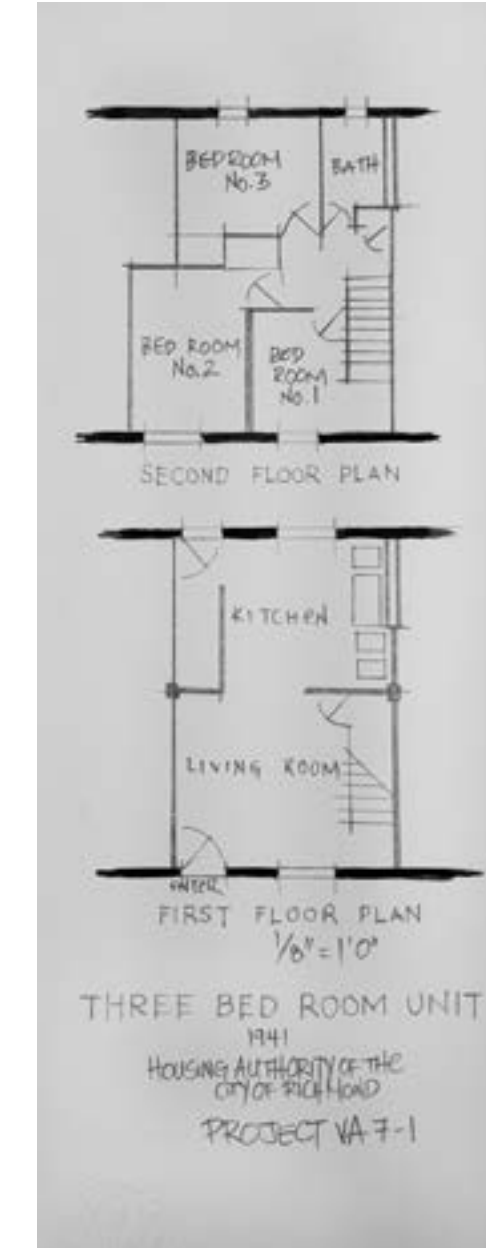


parti - datum | strong vertical and horizontal datum lines serve to anchor and regulate the design, visual continuity and architectural symmetry and balance

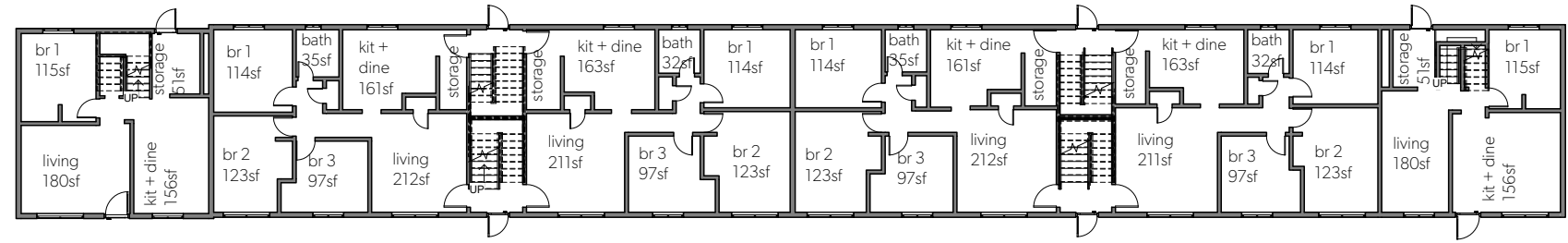


parti model - geometries | model suggests rectilinear forms, regulated datum lines, and uniform symmetry which emphasizes architectural order, conformity + regulation

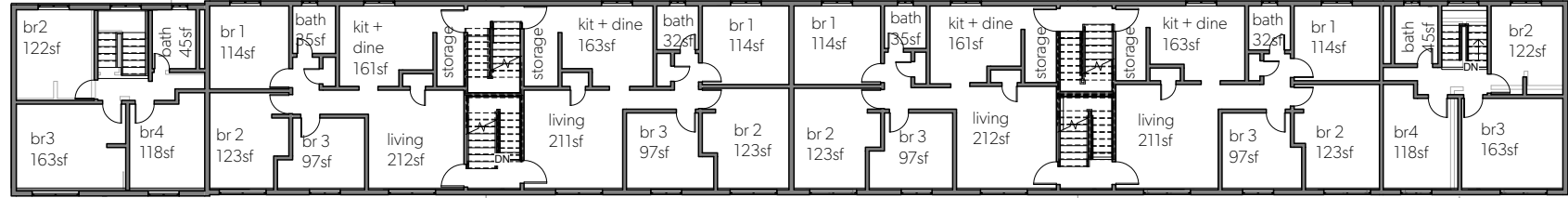
strong rectilinear building, dense and institutional, overuse of symmetry without syncopation, regulated datum lines, poorly aligned fenestrations, square orthogonal forms within the structure seem to exaggerate the rectilinear architecture, creating smaller nested geometries within the larger form. this seems to suggest architectural standardization, order, conventionality, uniformity, regulation and rigidity.



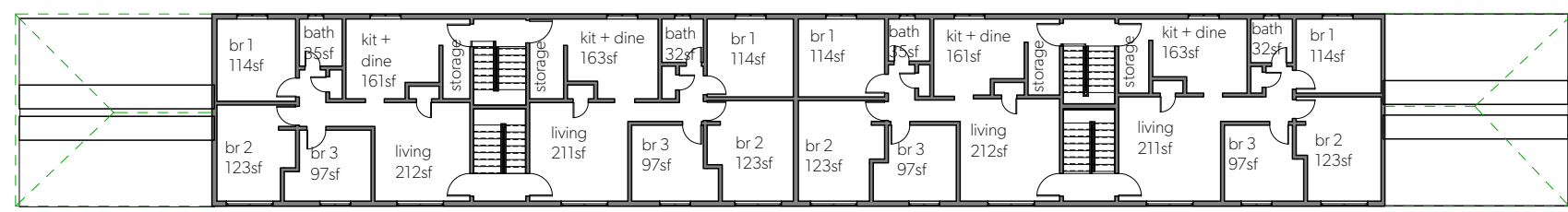
existing orthographics



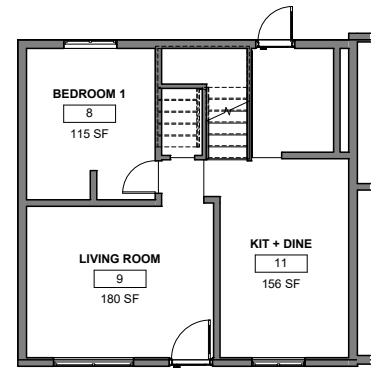
1 Existing Building Level 1 3/32nd
3/32" = 1'-0"



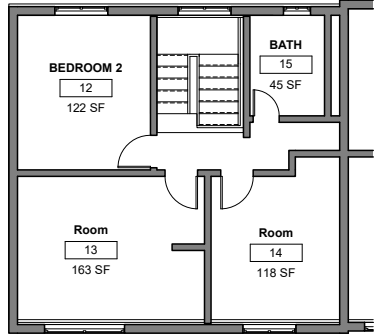
2 Existing Building Level 2 3/32nd
3/32" = 1'-0"



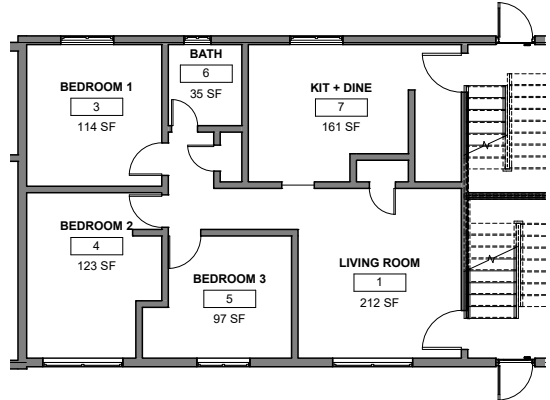
3 Existing Building Level 3 3/32nd
3/32" = 1'-0"



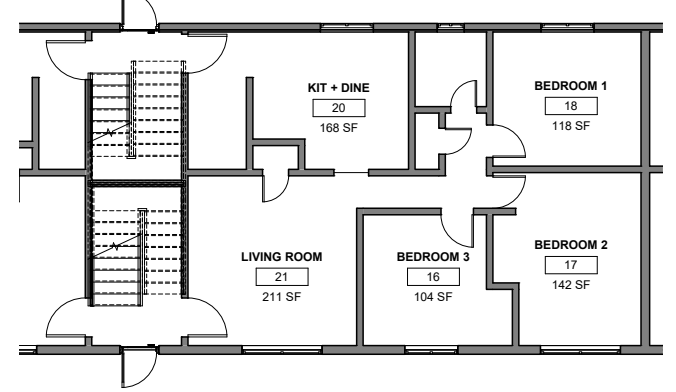
1 Level 1 - Unit 3 FX (4BR) Enlarged Plan 1st Floor
3/16" = 1'-0"



2 Level 2 - Unit 3 FX (4BR) Enlarged Plan 2nd Floor
3/16" = 1'-0"



3 Level 1 - Unit 4 (3BR) Enlarged Plan East
3/16" = 1'-0"



4 Level 1 - Unit 4 (3BR) Enlarged Plan West
3/16" = 1'-0"

total units | 14
total occupancy | 44

building specs
concrete floors and ceilings | cmu block walls
linoleum kitchen + bath
metal exterior doors | dbl hung windows

2 | 4 bedroom 1 bath multilevel approximately 886 sf
12 | 3 bedroom 1 bath single level approximately 796 sf

residents
approximately 983-1000 adults | 1200 children under age 17
predominately women | 97% african american
median annual income under 10K

developing the space

concept
schematic design
design development



photo credit: Itmoon, ph.d.

concept

statement

the design concept embodies the processes of relief, revival, and reincarnation, to magnify the importance of the interior environment of public housing residences.

the concept considers **relief** as designing to alleviate those architectural elements that are painful and distressing through by sculpting and carving from the host. the design seeks to **revive** by improving residential conditions that endured decline and bring a **reincarnated** design that respects the historical context of the existing neighborhood, the residents, and the building. to illustrate the concept, the design language of light, space, release and adaptability will be used.



photo credit: Itmoon, ph.d.

conceptual drivers

users

homeplace is...

warm

comfortable

secure + safe

accessible

equitable + comparable

private

flexible + adaptable

light filled

valued

permanent + stable

refuge + retreat

personal

belonging

communal

building

homeplace is ...

dense

symmetrical

inflexible + rigid

orthogonal + rectilinear

massive

industrial + impervious

institutional

i need

asymmetry

hierarchy

variety in geometry

variety in materiality

harmony

rhythm + syncopation

light

flexibility + adaptability

program

homeplace is...

permanent + stable

connected

valued | honorable

elevated

private

communal

light filled

preserved

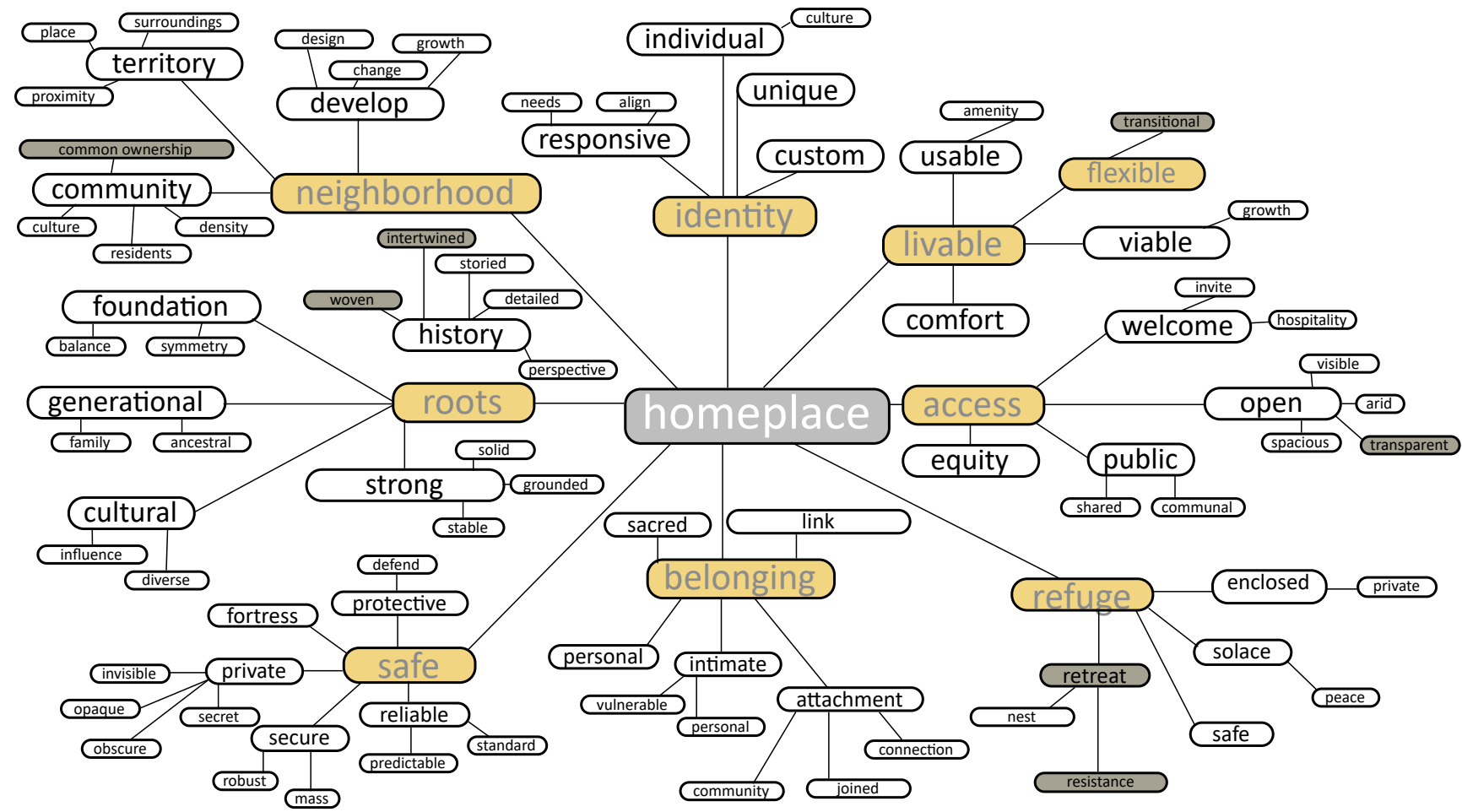
equitable | comparable

flexible + adaptable

accessible

refuge + retreat

inspire belonging



user interviews

i asked a group of african american women to provide reflections on

“what does homeplace mean to you?”

“what purpose does your home serve beyond shelter?”

“home is a place of love + safety. a place for building long memories and comfort. a place of peace and truthfulness, where i can be me without judgment. so important to our healing and recovery from the little hardships the world gives us every day!!” tgc, 2022

“for me, my house is a safe sanctuary. it is a place where i can be completely myself. its a place to pray, meditate, reflect, and commune with nature. a place for my children to “come home”, gather and entertain family + friends. a place to gather for meals, dinner parties or cookouts. my home is a place to get away from everything and everybody. looking at pictures, it allows me to reminisce and feel love. i love seeing the parts of me reflected in my furnishings, artwork and garden.” twb, 2022

“home is a place to relax + unwind after dealing with the world. it provides opportunities to share with family through meals, conversations + laughter. a place to renew + refuel mentally + emotionally.” ntg, 2022

“my home represents a safe space to be authentically me among the people that matter the most. it’s the place where i give voice to and act on new ideas (like my personal innovation lab, lol). in doing so, it’s also the first place that i fail, which provides the strength to be vulnerable\open to fail, which provides the strength to be vulnerable\open to failure in spaces beyond the home. i guess if i had to give a word other than shelter it would be my actualization lab! i test everything at home first....” cpa, 2022

“my home has stood for consistency and stability, a place where many memories have been made and lots of love has flowed through that place! it’s allowed us to take care of others and it reflects a measure of success”. dp, 2022

“besides shelter, my home is where i find my peace and where others know for sure that i love them. i only welcome people that i TRULY care about into my home. it inhabits my true self that i don’t share outside the 4 walls”. fsd, 2022

user interviews

"my home is a safe haven, not just for me but for others who seek solace with no judgment. no questions asked... if you need a moment, conversation, a laugh, a getaway or comfort beverage, i welcome that. i've worked hard to make sure my invited guests experience good energy. i think it is important to enjoy every room, the china (feel free to use it), relax. all in all, God has blessed me to make this house a home and anything else i want it to be. no limits." lsp, 2022

"home for me is many things. it's a place to unwind, relax, + release the pressures of the day. a place to entertain and enjoy family + friends through fellowship, food + fun. a place to invite others who may need a temporary roof over their head while going through a rough time in their life. a place to worship, praise + be thankful for all blessings." mw, 2022

"home signifies safety, nurturing, belonging, truth, relaxation, tough love, + memories. a place where i can be selfless + vulnerable. home is where you have permission to remove the mask and be your true self, your retreat where you can let go of the expectations the outside world has placed on you!" jpg, 2022

"home for me is absolutely a place of peace and relaxation. i even have my favorite place in my home where i wind down and take my mental break. my home represents a place of love, laughter, excitement, hope and caring. when others come to my home, they feel the same energy and normally don't want to leave because of the love and positive energy. home is that blessed place where my family and loved ones can be secure, have all they need... my love." cna, 2022

"my home is a representation of the relationship that i have with God + the one He has with me. it is a perfect combination of His promises and my perseverance. it is faith, joy, opportunities, protection, new family patterns, and a safe haven to me and others and my widest dreams come true. it is the first place i ever called home." kws, 2022

"home is a place of solace that represents me as a person. a place to relax + share with friends + family. a place where i feel safe." bt, 2022

concept model exploration

the user interviews prompted an exploration of homeplace as a retreat, refuge, support, and nurturing. the exploration helped to conceptualize the meaning home as fluid and organic, taking shape and form over time in response to the context and circumstances that surround it.

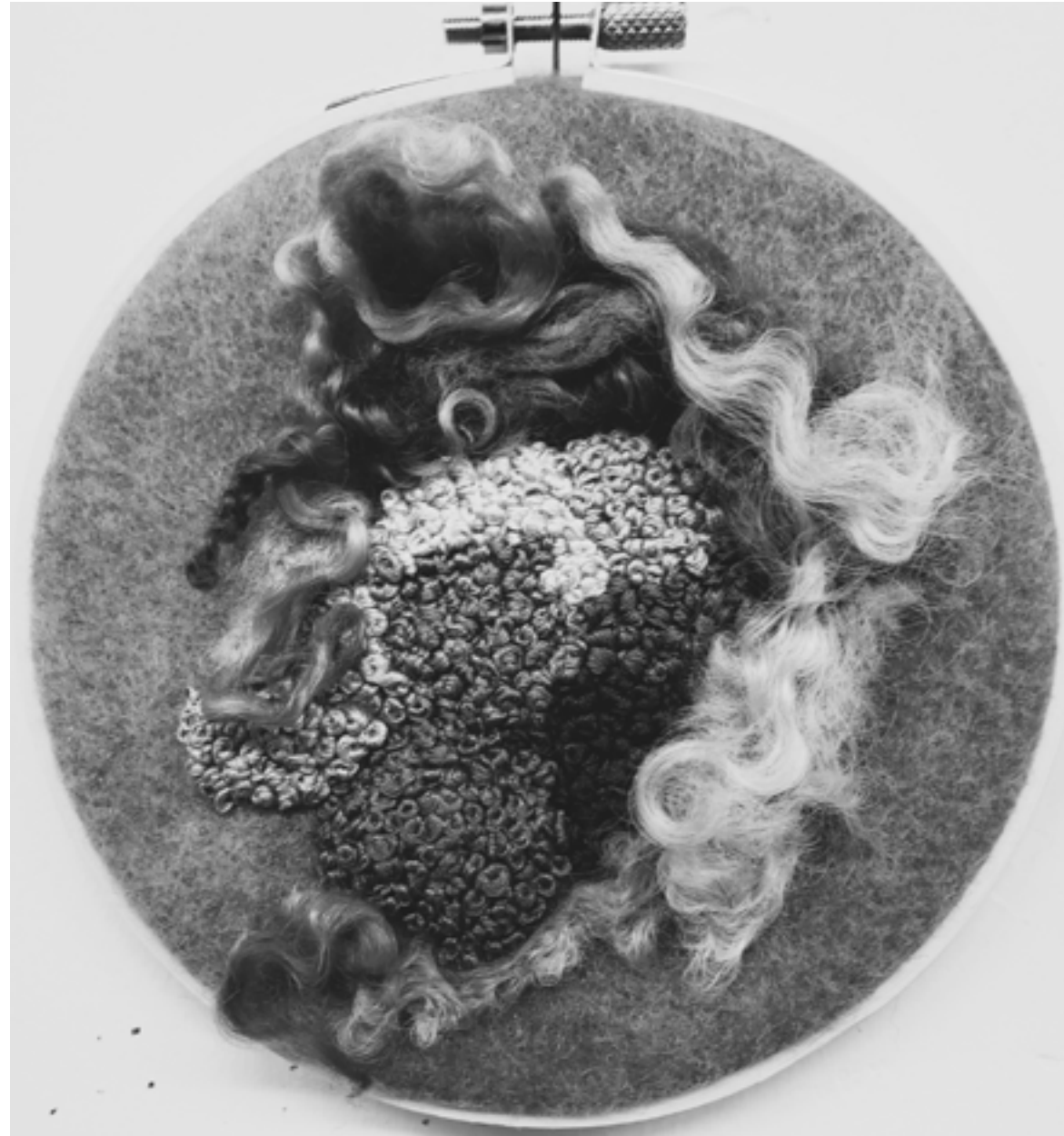
in her essay, *homeplace*, bell hooks describes it as a place of resistance, “a space where we return for renewal and self recovery, where we can heal our wounds and become whole...” *excerpt of homeplace(a site of resistance), 2014*

in his book *evicted: poverty and profit in the american*, matthew desmond describes the home as “the wellspring of personhood. it is where our identity takes root and blossoms, where as children we imagine place, and question, and as adolescents, we retreat and try. as we grow older, we hope to settle into a place to raise a family or pursue work. when we try to understand ourselves, we often begin considering the kind of home in which we were raised.” *excerpt of Evicted: Poverty and Profit in the American City, 2016*

through the use unconventional model making materials, i was reminded that the project has human qualities and allowed me to channel the spiritual elements that accompany home.



the embroidery stitches emulate density and beauty as well as the organization, woven elements.



the textural quality of the linen, wool, and cotton suggest adaptability and the response fibers have to one another and environmental circumstances.



the woven pattern in this concept model prompted a exploration of what exists in between the warp and weft. we often overlook the forms and spatial qualities that exist within the weave.



concept models | puncturing a plane results in increased light, air, openness, circulation, spatial + visual continuity, structural volume, + horizontal + vertical spatial edges

conceptual influence polyvalence vs. determinism

concept influenced by the precedence of herman hertzberger's theory of polyvalence. It is the capacity to design a versatile communal living space that is adaptable rather than flexible. in this case, adaptable is defined by the occupant preferences without adjusting the way it has been constructed. the theory contradicts the foundational principles of determinism which prescribes how the space is supposed to be used. deterministic principles reduce the likelihood that the end user has a sense that the space "belongs to them".

6 critical polyvalent spaces cooking | eating | sleeping | working | bathing | gathering

fixed public

equipment defines use
space shared w/ other rooms
significant polyvalence
high adaptability
largest physical space
room boundaries are fluid
natural light + air required

typical spaces
kitchen + laundry

fixed private

equipment can define use
space not shared w/other rooms
natural light + air required
low polyvalence
low adaptability
2nd largest physical space
room boundaries are static

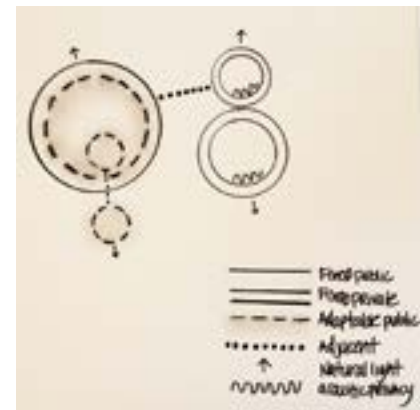
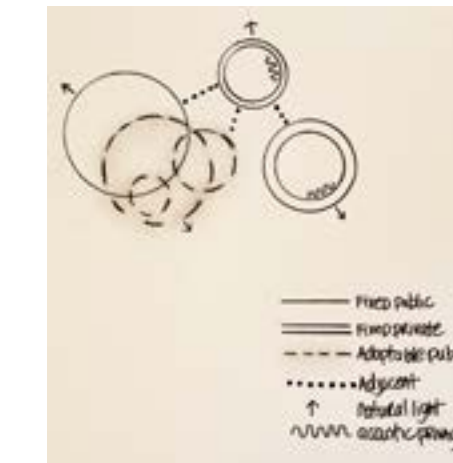
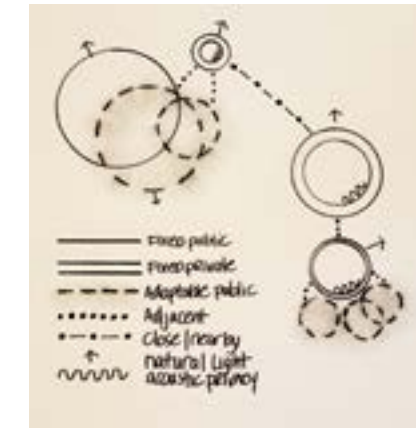
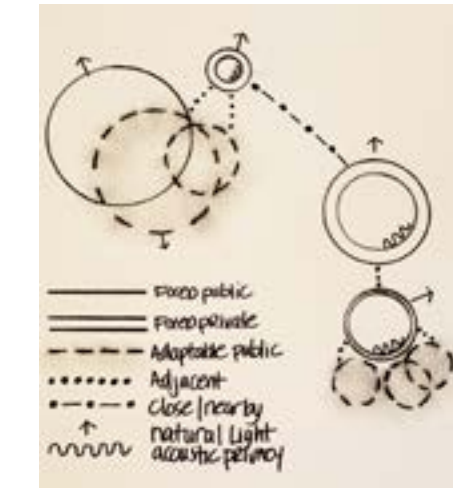
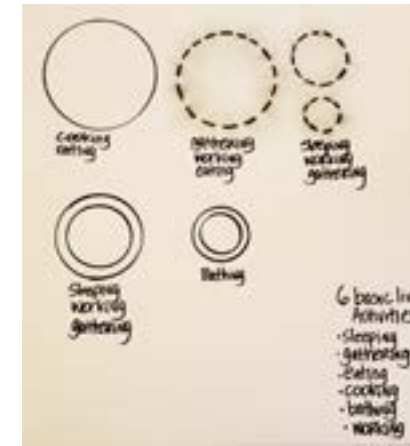
typical spaces
baths + owners space

adaptable public

equipment does not define use
significant polyvalence
overlaps when user determines
natural light + air preferred
high adaptability
room boundaries are fluid

typical spaces
bedrooms + family room
dining + office

adjacency matrices



matrices provide iterations of polyvalent spatial configurations that include fixed + adaptable spaces as well as private + public spaces.

schematic design

design question

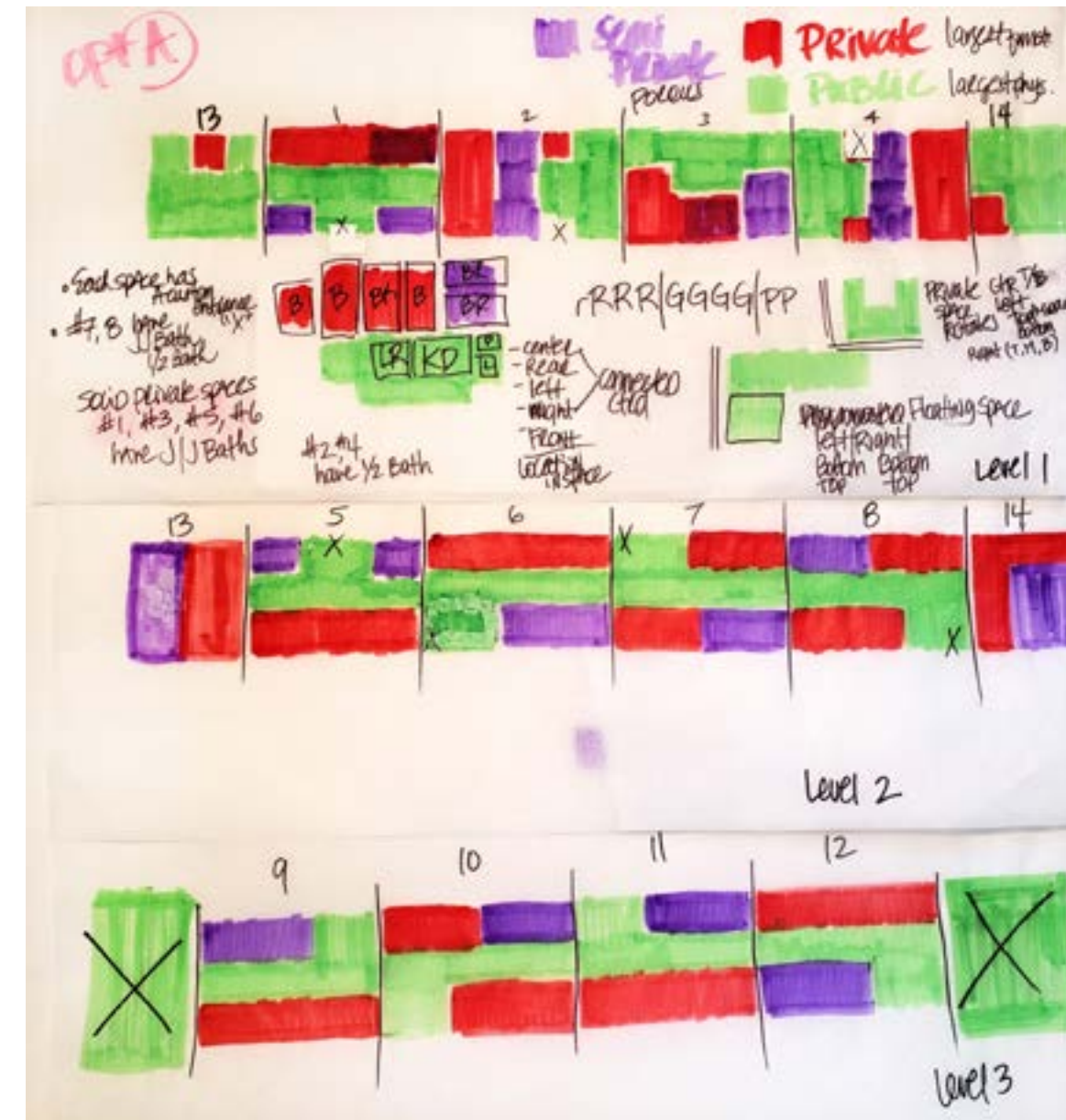
does the design (1) improve the livability of the entire space (risking displacement) or (2) improve the space as it exists?

to address the questions, i developed a series of schemes to respond to concept and theory while examining the issues of density, compression | relief, circulation, geometries as well as pre-existing social issues that emerge from situations of economic scarcity + material hardship.



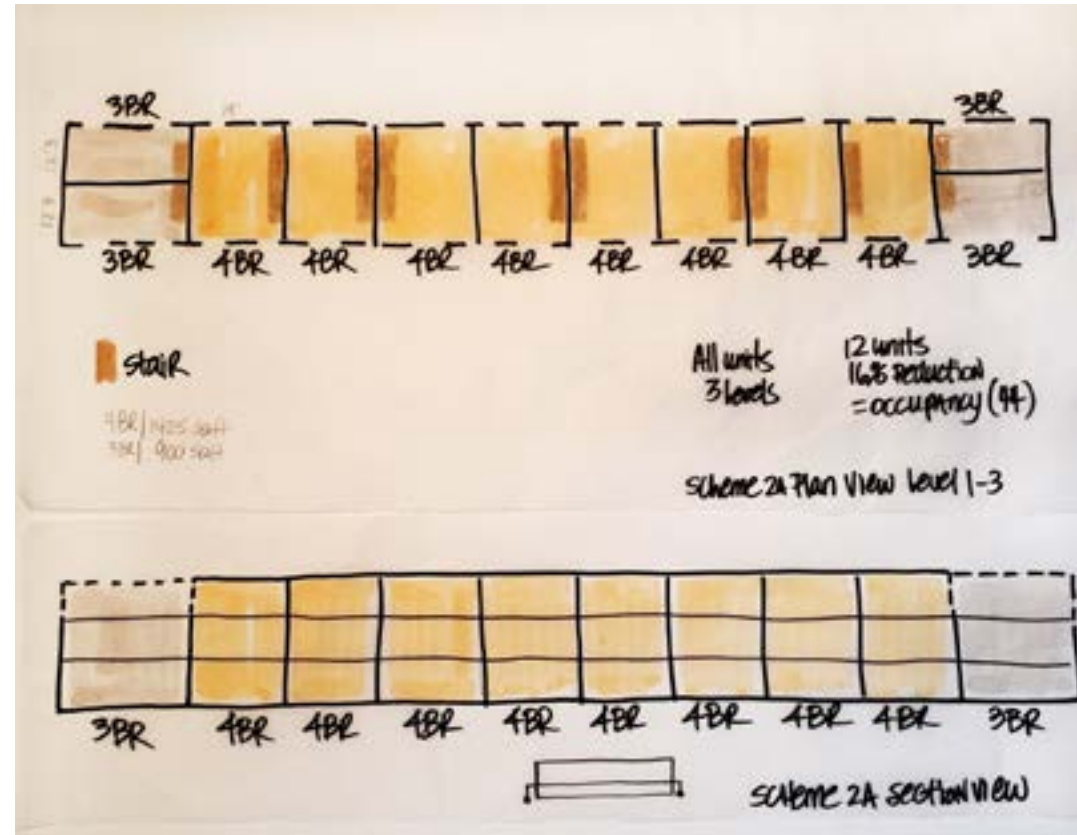
schematic 1

14 units maintained with designated rooms + spaces, does not address the concept of polyvalence, maintains the persistent issues of residential density, little opportunities for end user to customize space based on family needs overemphasizes rectilinear forms, regularity, uniformity, and institutionalism.



schematic a

polyvalence addressed + 14 units maintained with different configurations for each unit, maintains the persistent issues of residential density, each unit has an individual entrance (x) however 3 units have a rear entrance which is a hardship given on-street parking, assignment of private, public and semi private spaces.

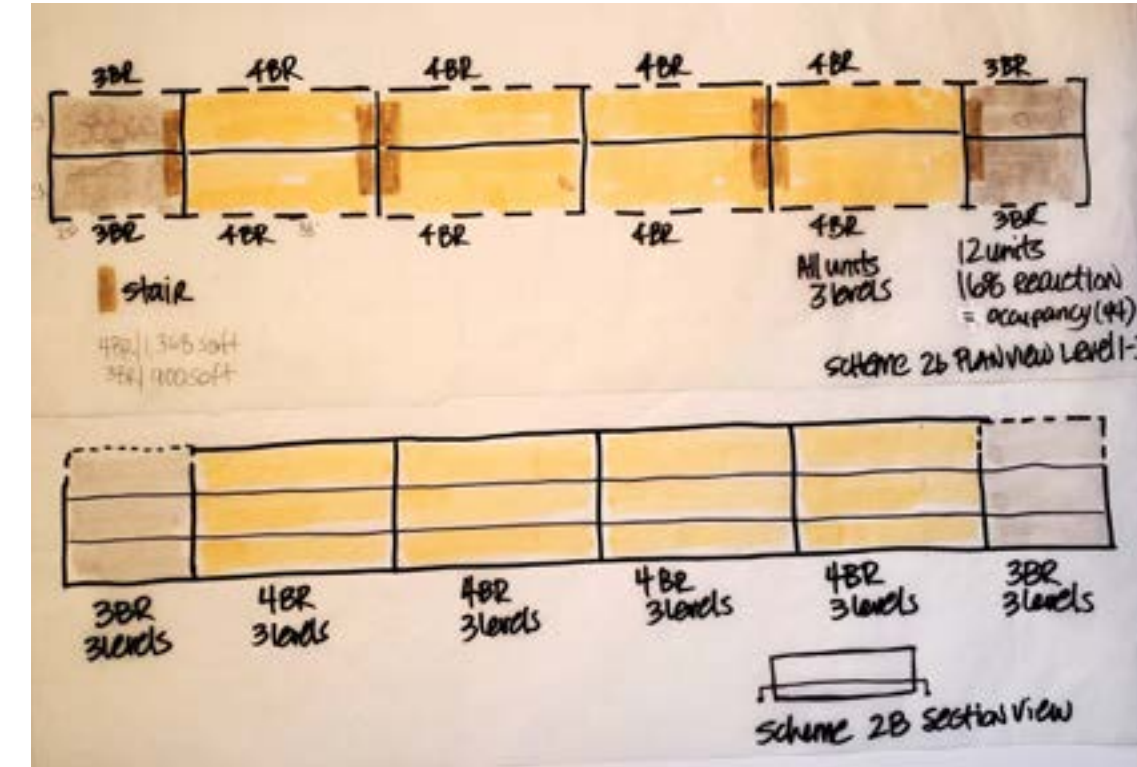


schematic 2a polyvalent

12 units (16% reduction),
occupancy of 44
maintained

8 | 4 bedroom units
(1425 sf)
4 | 3 bedroom units
(900 sf)
all units have 3 levels

3 bedroom units maintain issues of circulatory compression with little to no relief, polyvalent concept but room size is small which does not meet conceptual criteria, unit is 25'w x 12'd. 4 bedroom units are shotgun style design, 19'w x 25'd.

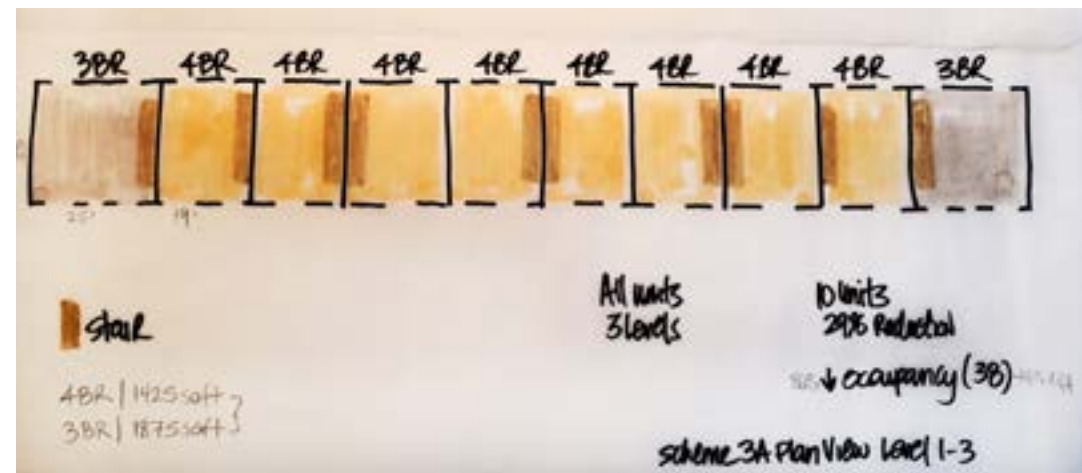


schematic 2b polyvalent

12 units (16% reduction),
occupancy of 44
maintained

8 | 4 bedroom units
(1368 sf)
4 | 3 bedroom units
(900 sf)
all units have 3 levels

3 bedroom units maintain issues of circulatory compression with little to no relief, polyvalent concept but room size is small which does not meet conceptual criteria, unit is 25'w x 12'd. 4 bedroom units take advantage of building width, 38'w x 12'd, however half the units have rear entrances which is a hardship.

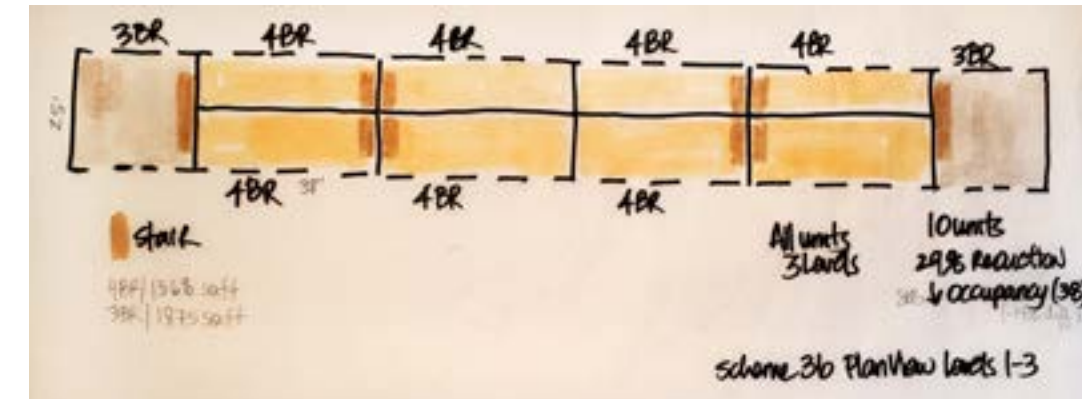


schematic 3a polyvalent

10 units (29% reduction),
occupancy of 38
(14% reduction)

8 | 4 bedroom units
(1425 sf)
2 | 3 bedroom units
(1875 sf)
all units have 3 levels

3 bedroom units have been
doubled in square footage
alleviating the issues of
circulatory compression
polyvalent concept evident.

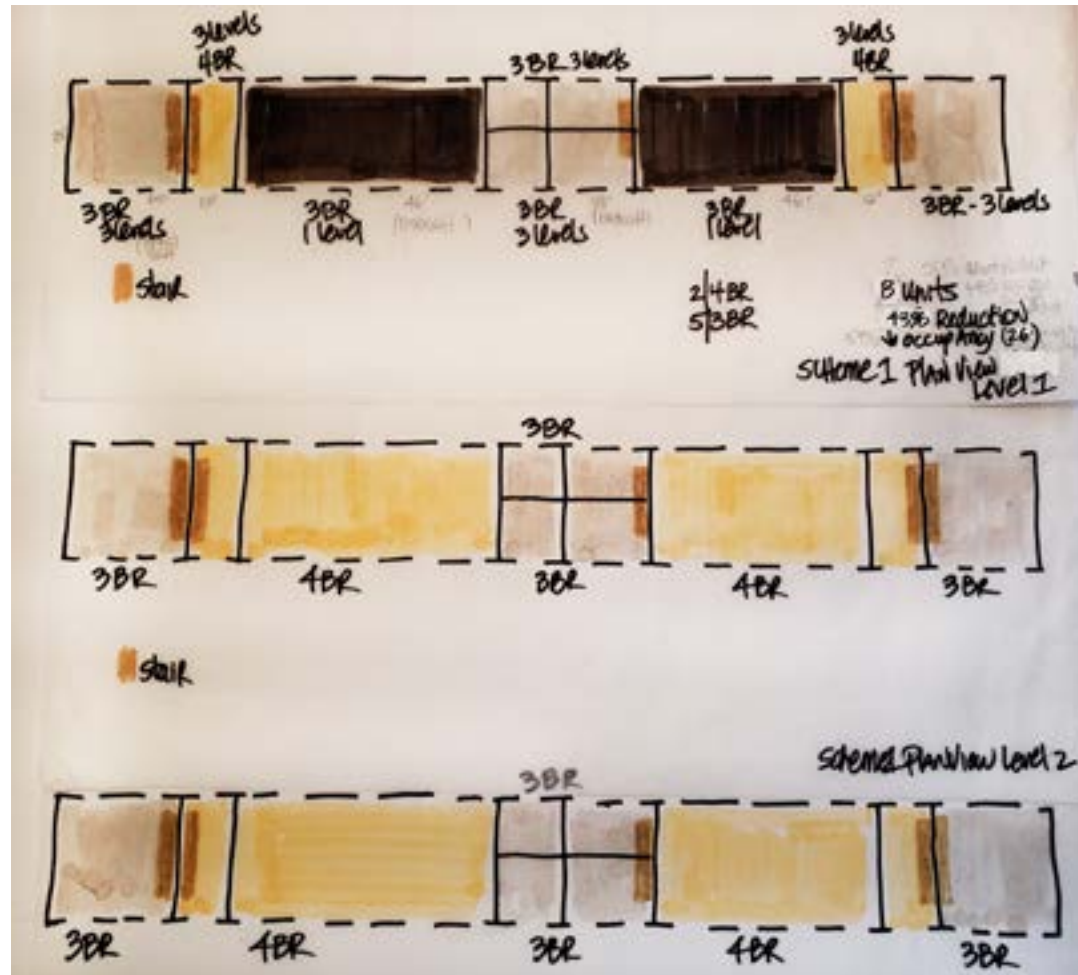


schematic 3b polyvalent

10 units (29% reduction),
occupancy of 38
(14% reduction)

8 | 4 bedroom units
(1368 sf)
2 | 3 bedroom units
(1875 sf)
all units have 3 levels

3 bedroom units have been
doubled in square footage
alleviating the issues of
circulatory compression
polyvalent concept evident.
4 bedroom units are
minimally smaller. with rear
entrances for half of the units



8 units
15% reduction
occupancy (26)
scheme 1 Plan View Level 1

scheme 1 Plan View Level 2



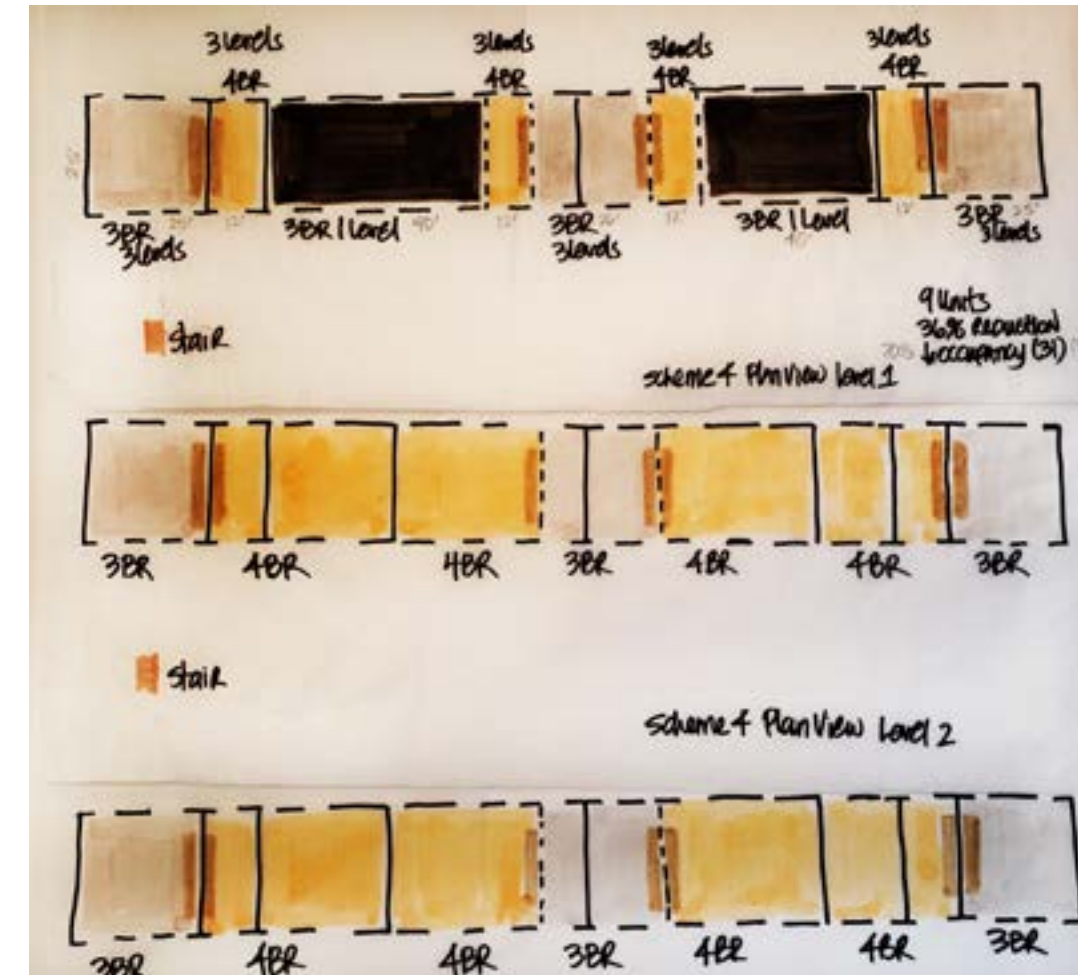
scheme 1 section view

schematic 1 polyvalent

7 units (50% reduction),
occupancy of 26
(41% reduction)

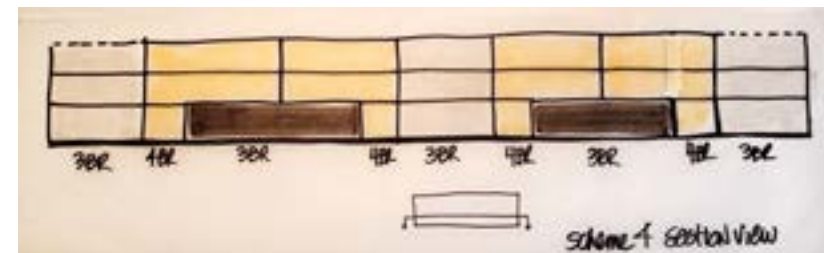
- 2 | 4 bedroom units (3200 sf)
- 5 | 3 bedroom units (1150 - 1875 sf)
- 5 units multilevel
- 2 units single level

alleviating the residential density + decreasing the circulatory compression by adding architectural relief elements. units have individual front entrances. polyvalent concept implemented given the size of rooms and relationship rooms have with fixed activities.



9 units
36% reduction
occupancy (31)
scheme 4 Plan View Level 1

scheme 4 Plan View Level 2



scheme 4 section view

schematic 4 polyvalent

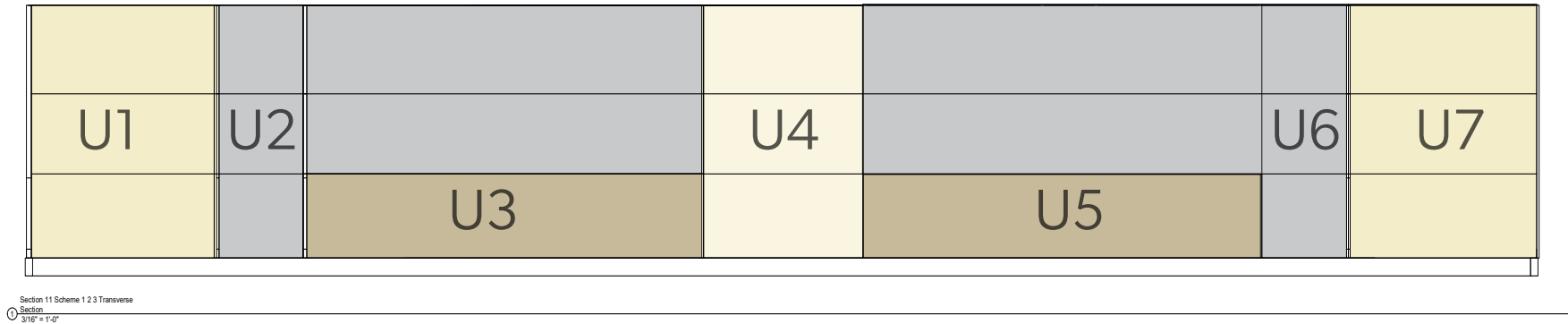
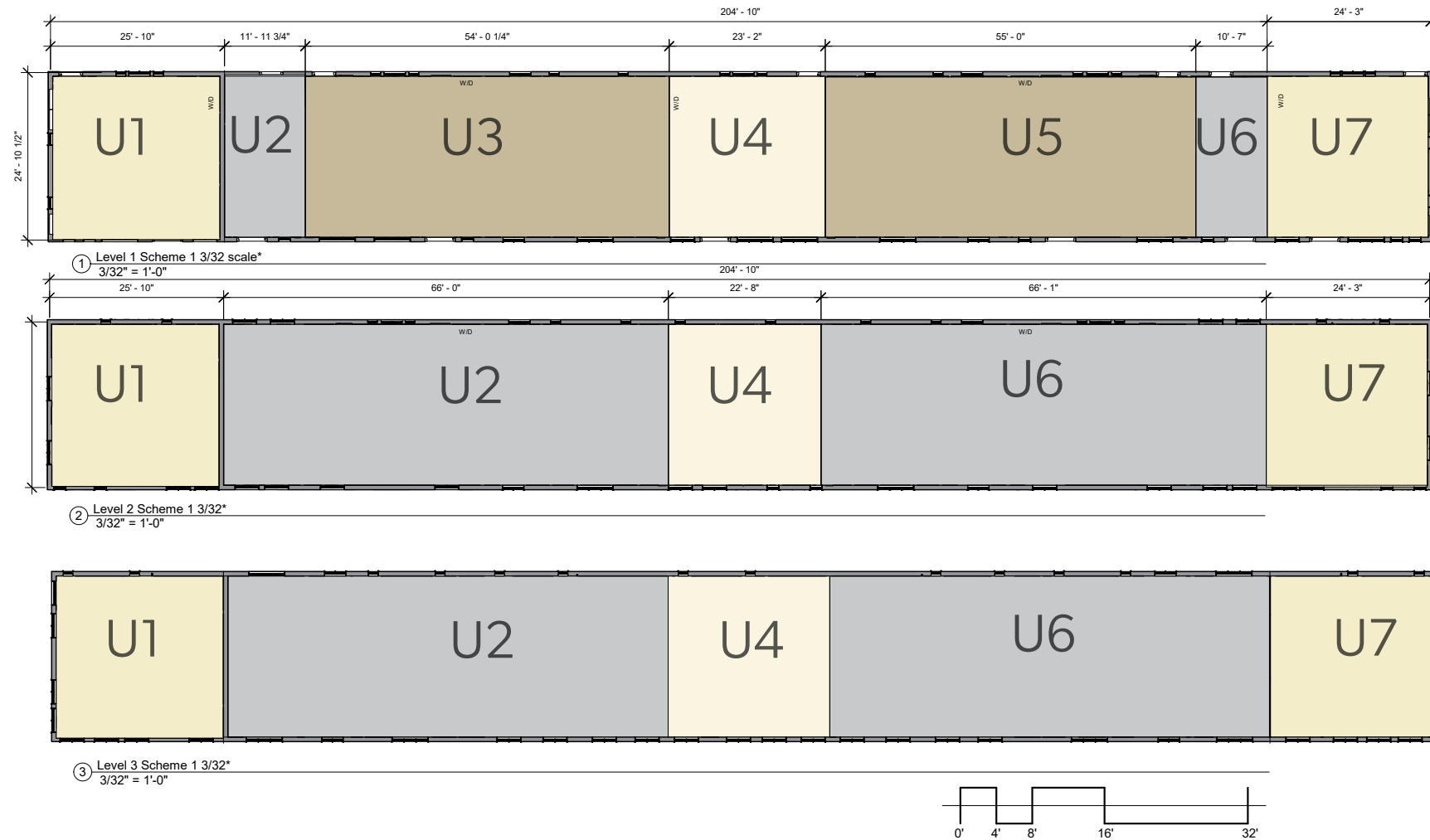
9 units (36% reduction),
occupancy of 31
(30% reduction)

- 4 | 4 bedroom units (1600-1700 sf)
- 5 | 3 bedroom units (1150 - 1875 sf)
- 5 units multilevel
- 2 units single level

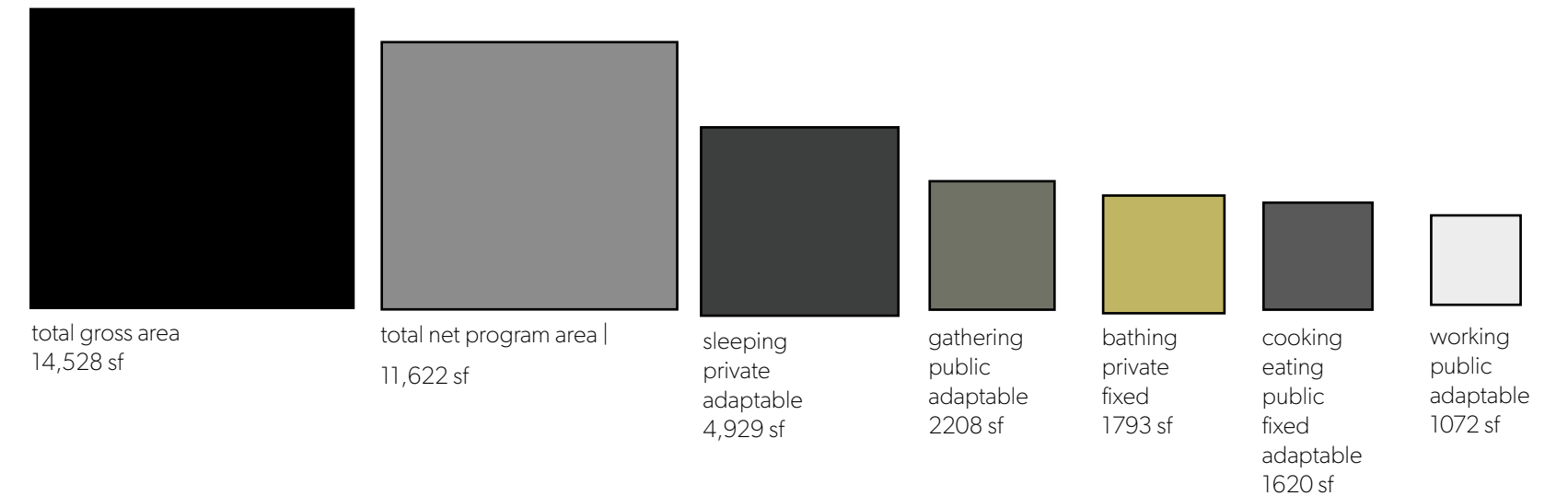
alleviating the residential density + decreasing the circulatory compression by adding architectural relief elements. units have individual front entrances. polyvalent concept implemented given the size of rooms and relationship rooms have with fixed activities.



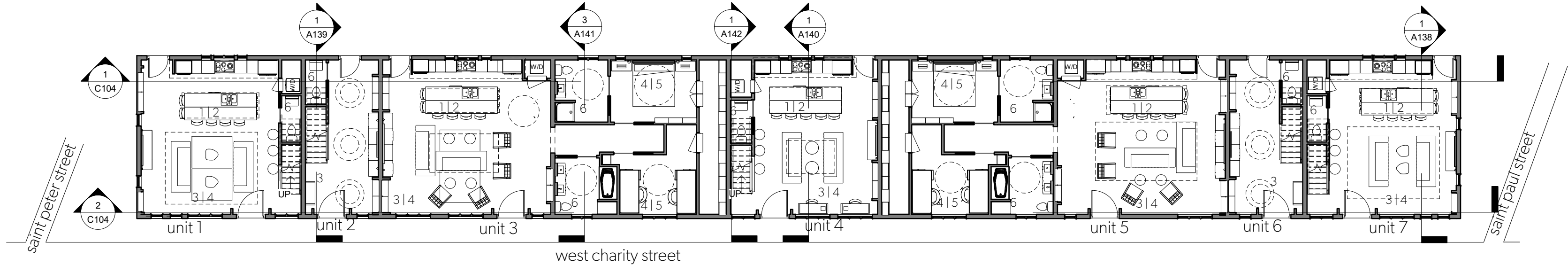
block plan scheme 1 polyvalent
final design



graphic program (scale 1/64" = 1'0)



design development | plan



① Level 1 Furniture Plan 3/32 *
3/32" = 1'-0"

legend

1-cooking-public|fixed

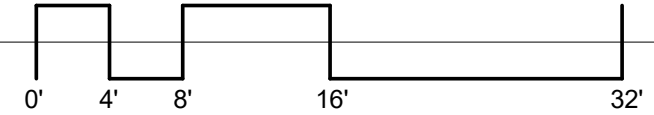
2-eating-public|adaptable

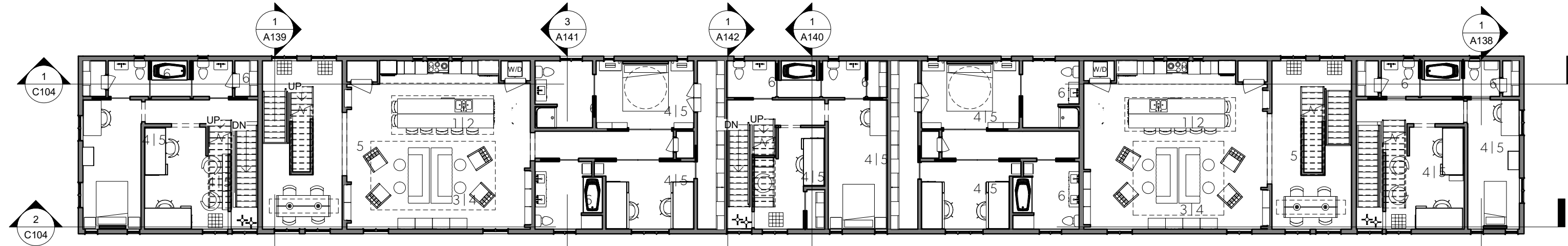
3-gathering - public|adaptable

4-working-public|adaptable

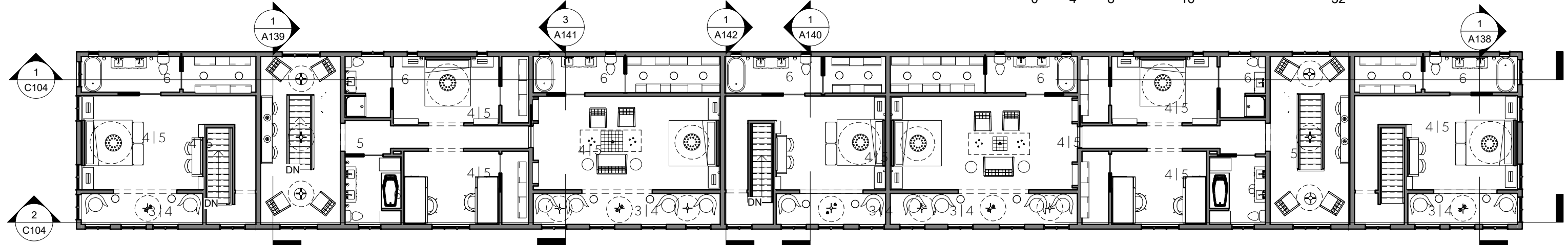
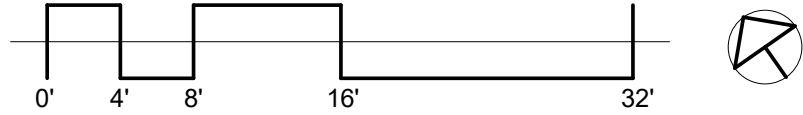
5-sleeping -private|adaptable

6-bathing-private|fixed

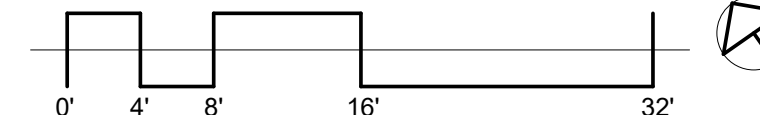




② Level 2 Furniture Plan 3/32*
3/32" = 1'-0"

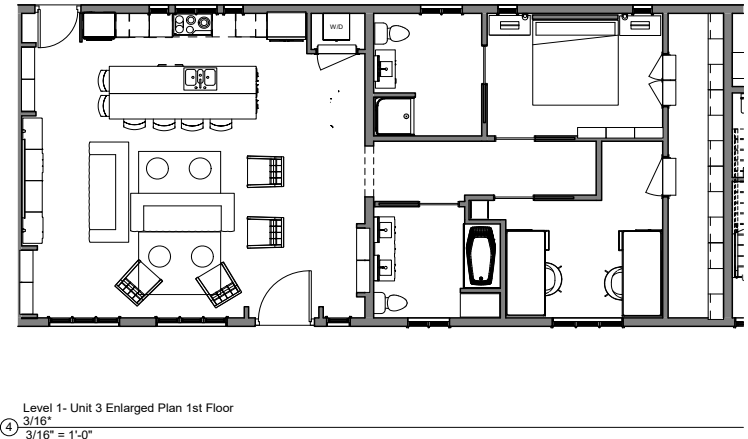
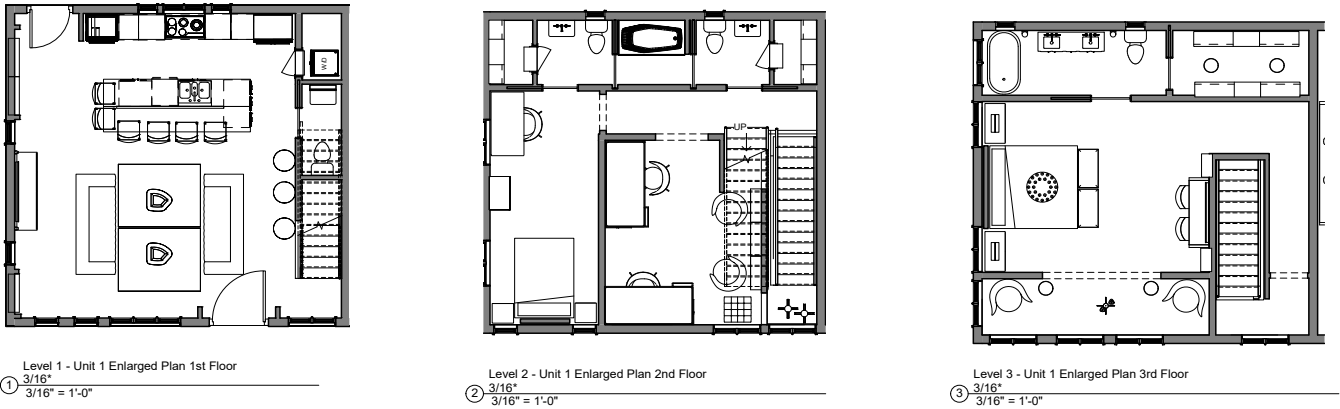


③ Level 3 Furniture Plan 3/32*
3/32" = 1'-0"



- legend
- 1-cooking-public|fixed
 - 2-eating-public|adaptable
 - 3-gathering - public|adaptable
 - 4-working-public|adaptable
 - 5-sleeping - private|adaptable
 - 6-bathing-private|fixed

enlarged plan views | unit 1 (unit 4 + unit 7)+ unit 3



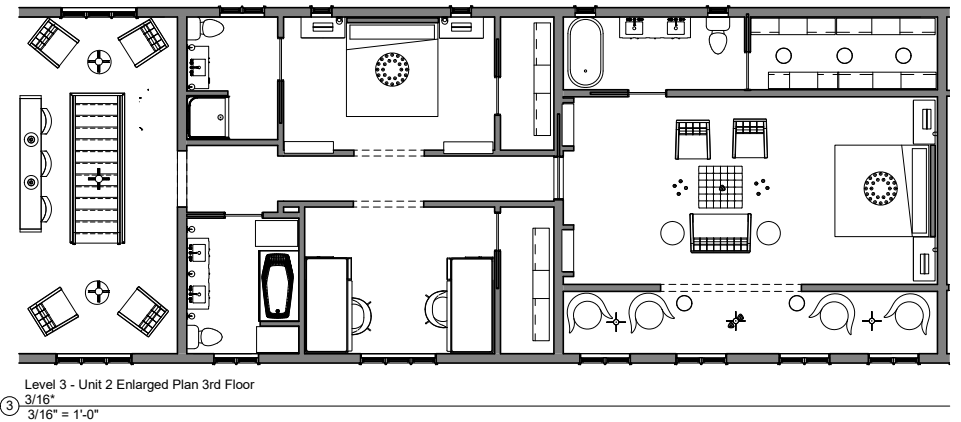
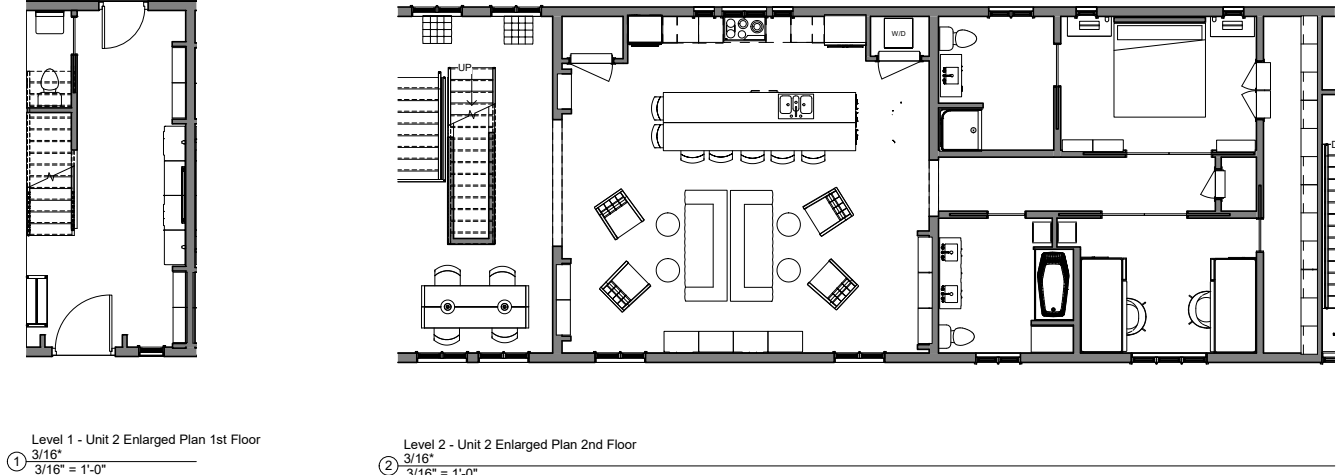
total units | 7 (50% unit reduction)
total occupancy | 23 (48% less occupancy)

2 2 private spaces for sleeping + 2 baths
approximately 1344 square feet

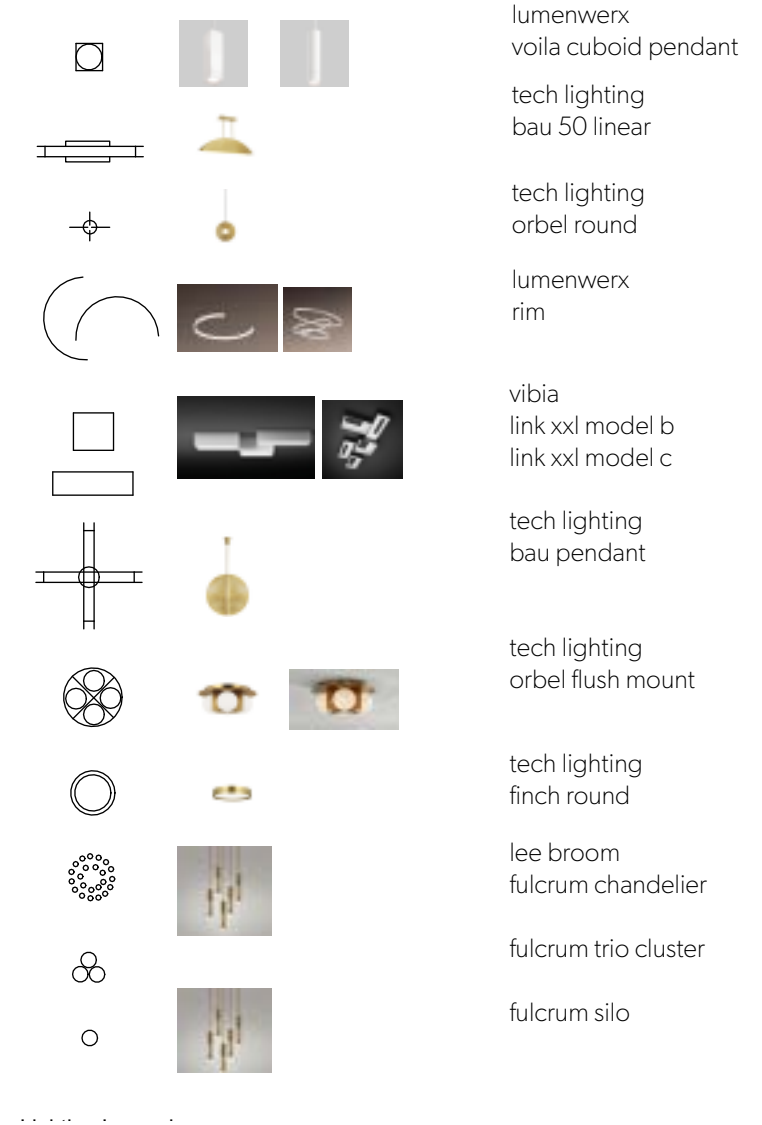
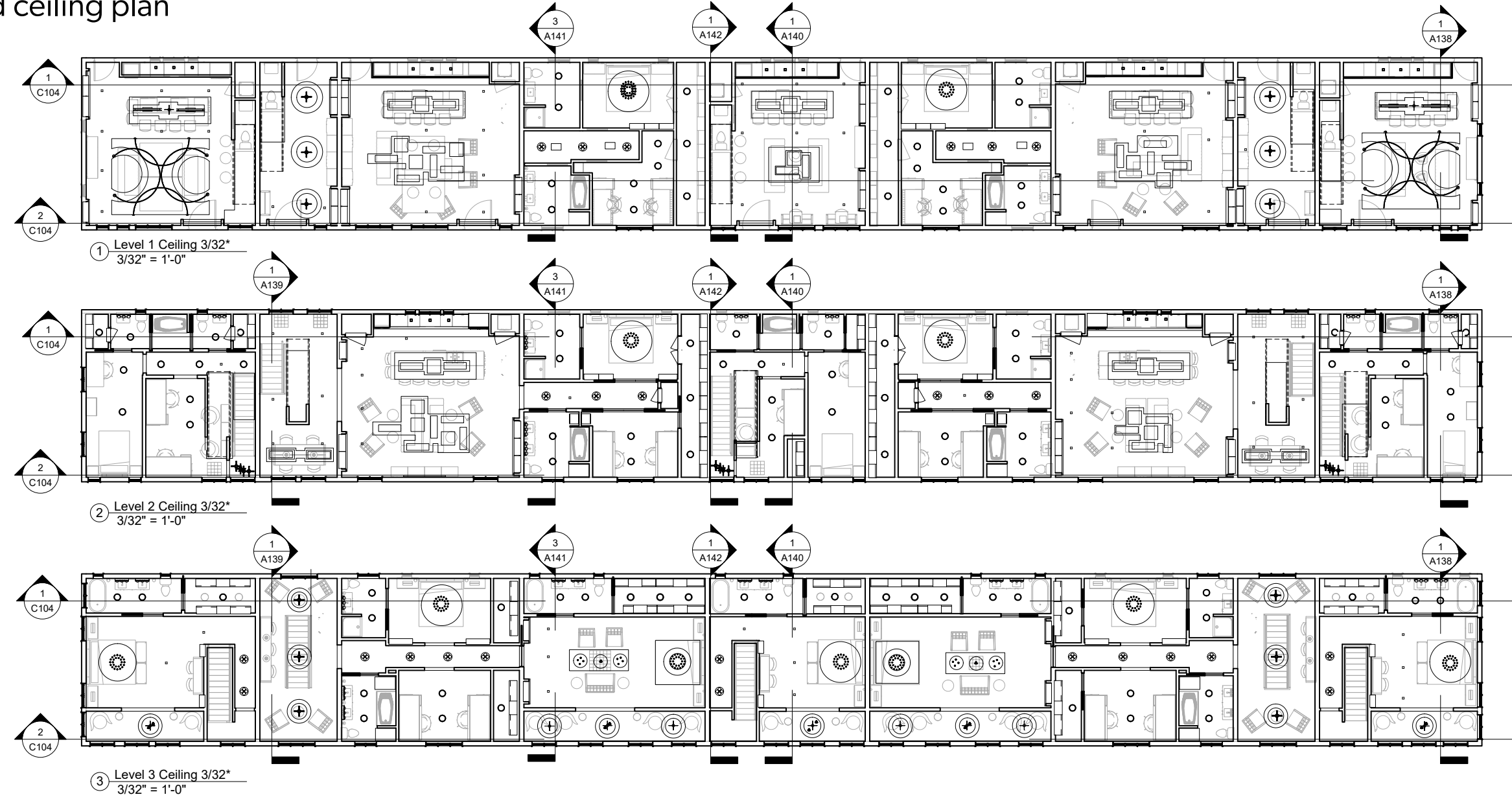
3 units with 3 private spaces for sleeping + 3.5
baths
approximately 1584-1728 square feet

2 units with 5 private spaces for sleeping + 5.5 baths
approximately 2976 square feet

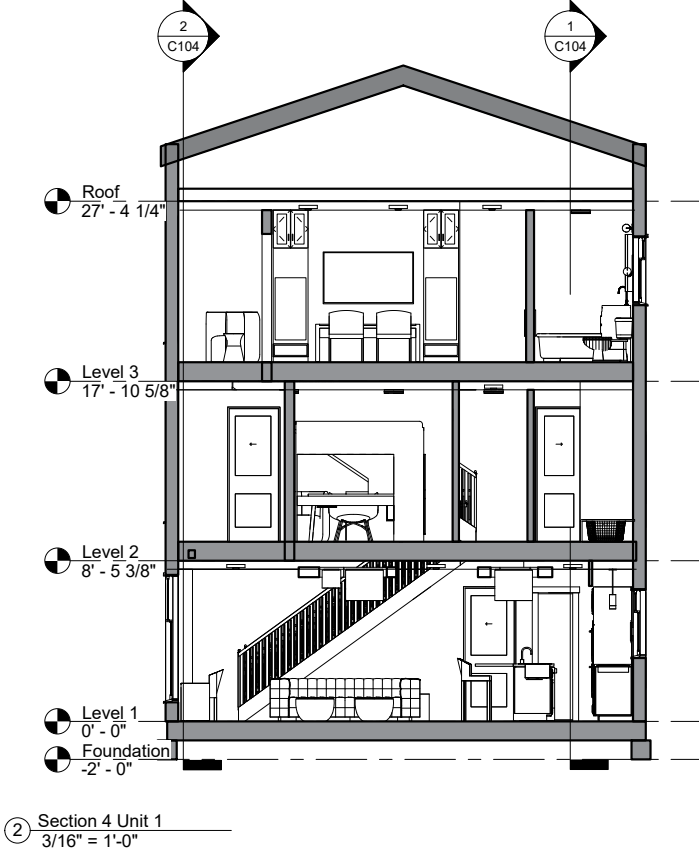
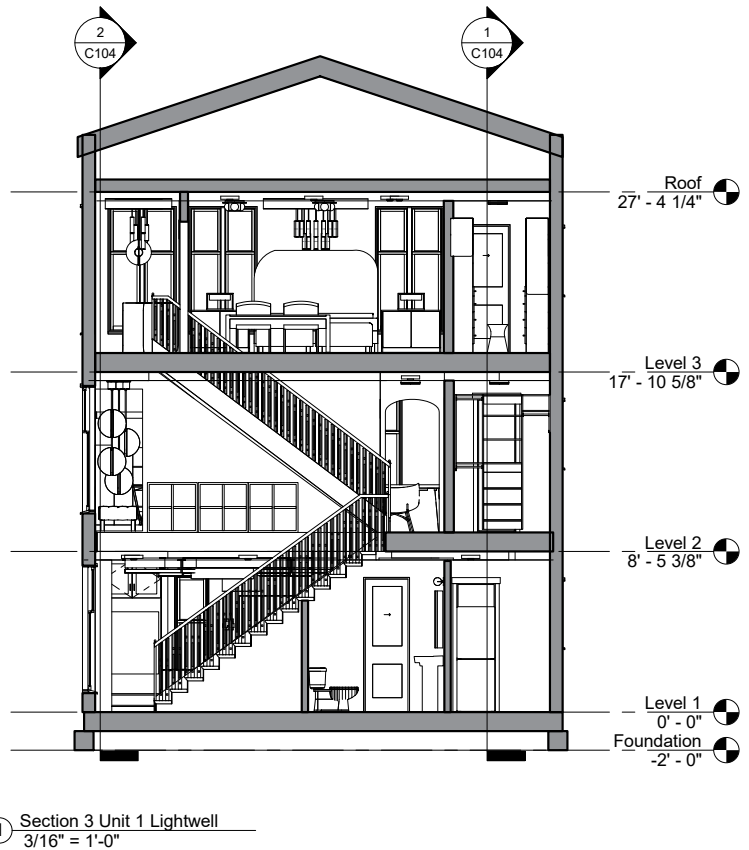
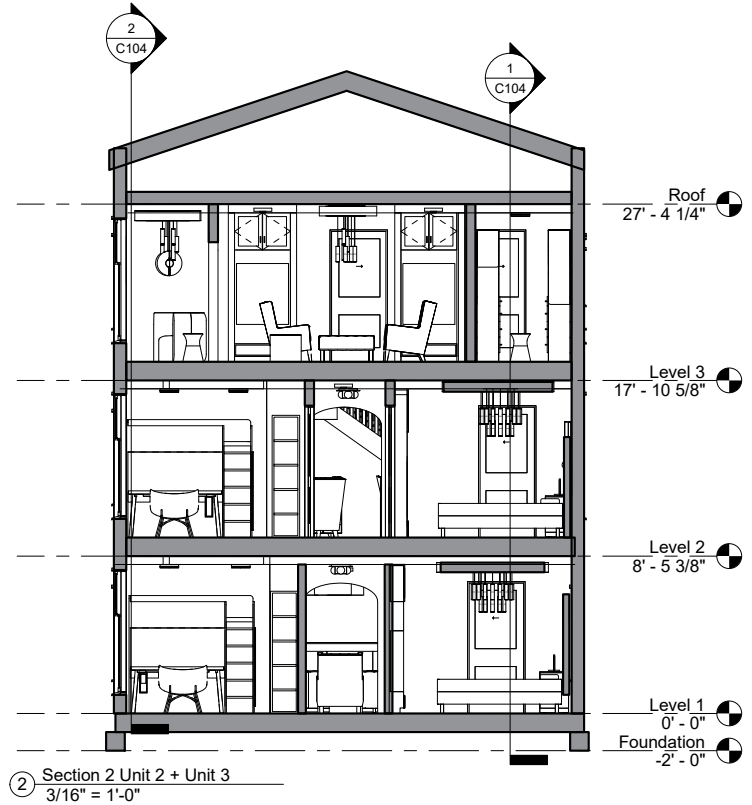
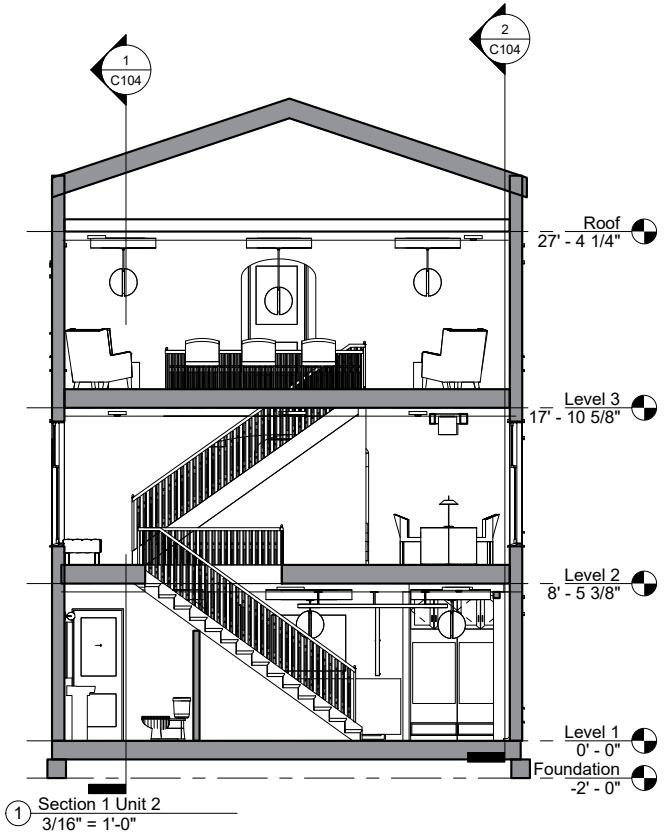
enlarged plan views | unit 2 (unit 6)



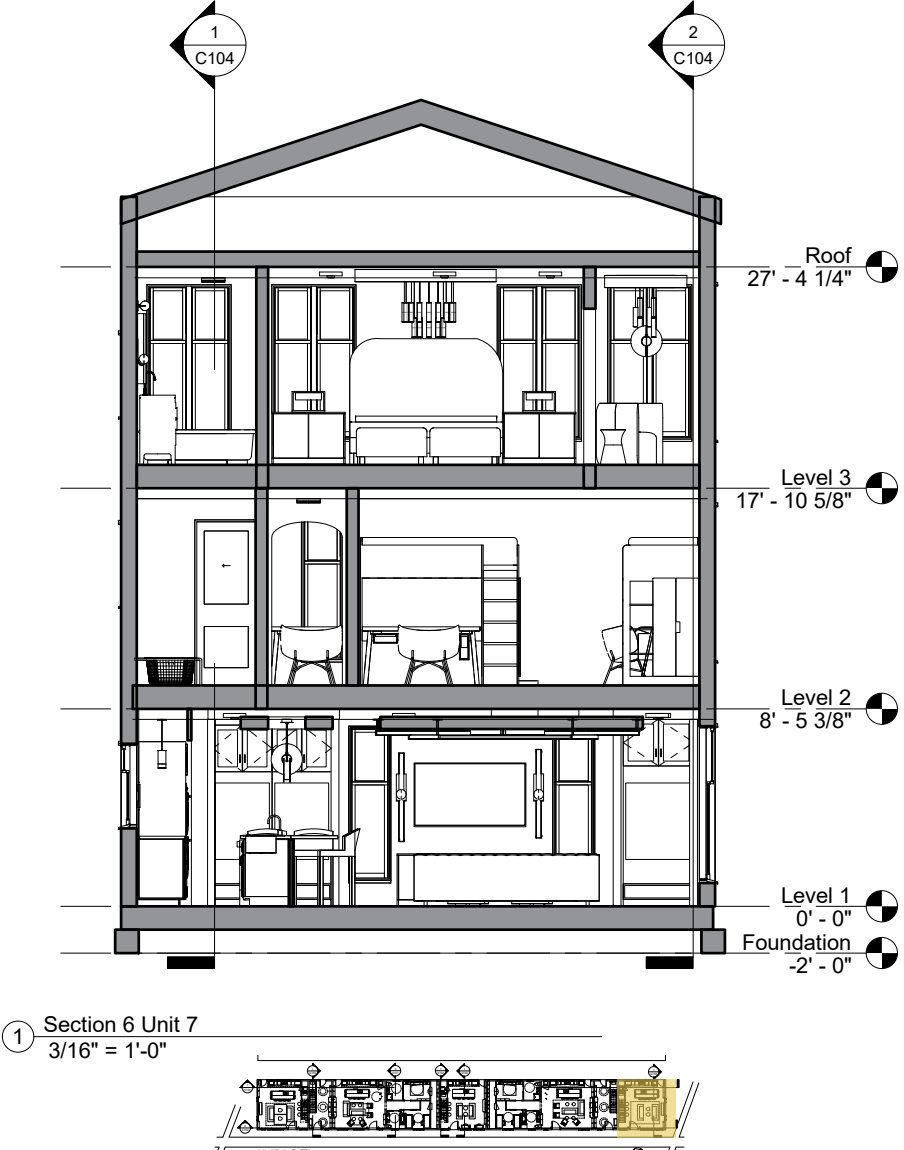
reflected ceiling plan



section views



section | perspective views



① Section Perspective 1 Unit 2





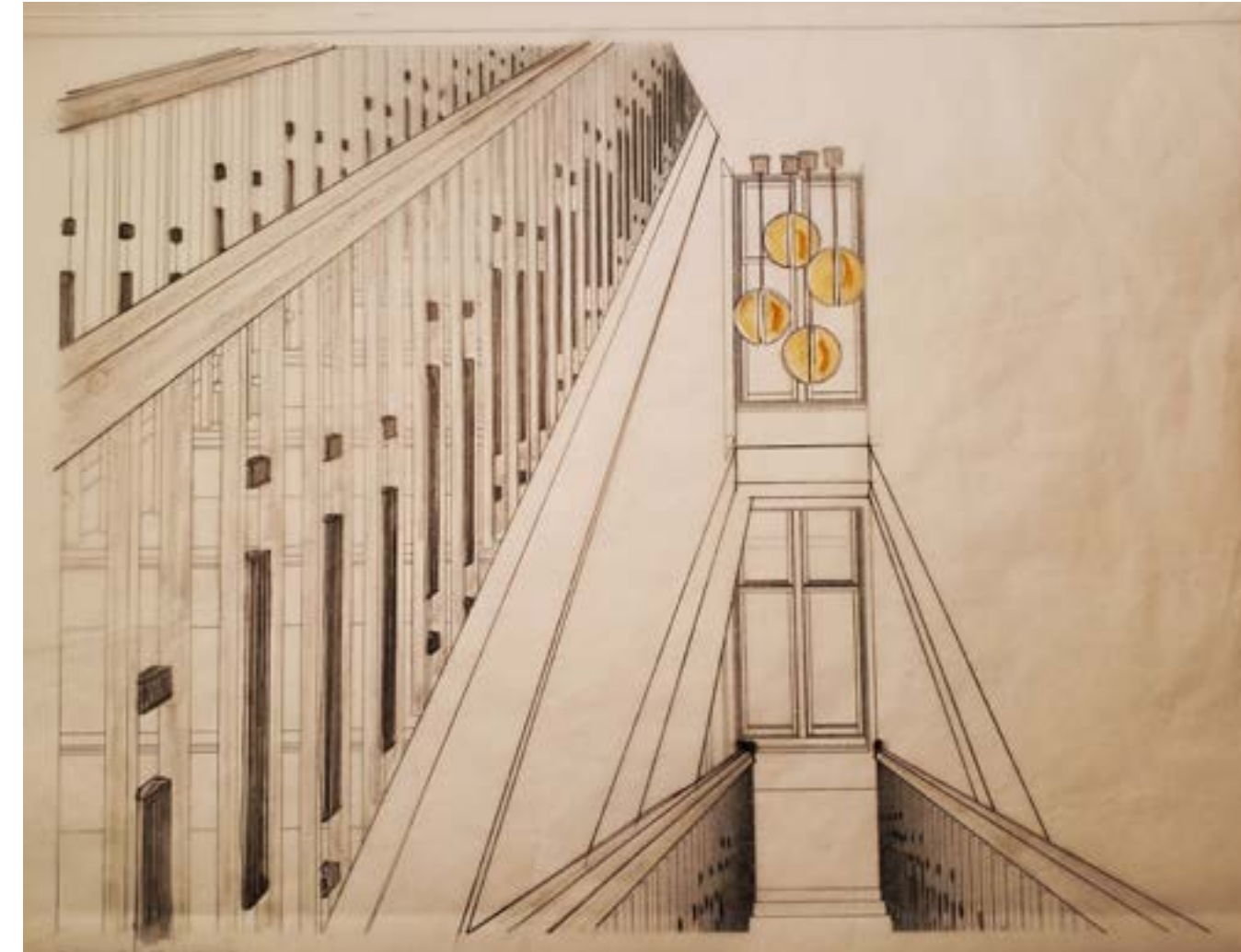
adaptable public space allocated for several essential activities that includes gathering, living, dining, + working, however, based on the end user's needs, this adaptable space can also serve as a sleeping space. there is a high degree of polyvalence. room boundaries are fluid and room can overlap with other spaces when user determines.



fixed public space allocated for cooking, as objects + equipment is fixed (cabinets, plumbing). fluid boundaries allow the space to be shared with other rooms for multiple purposes that include eating, working, gathering. high polyvalence and pseudo partitions designate spatial transitions.



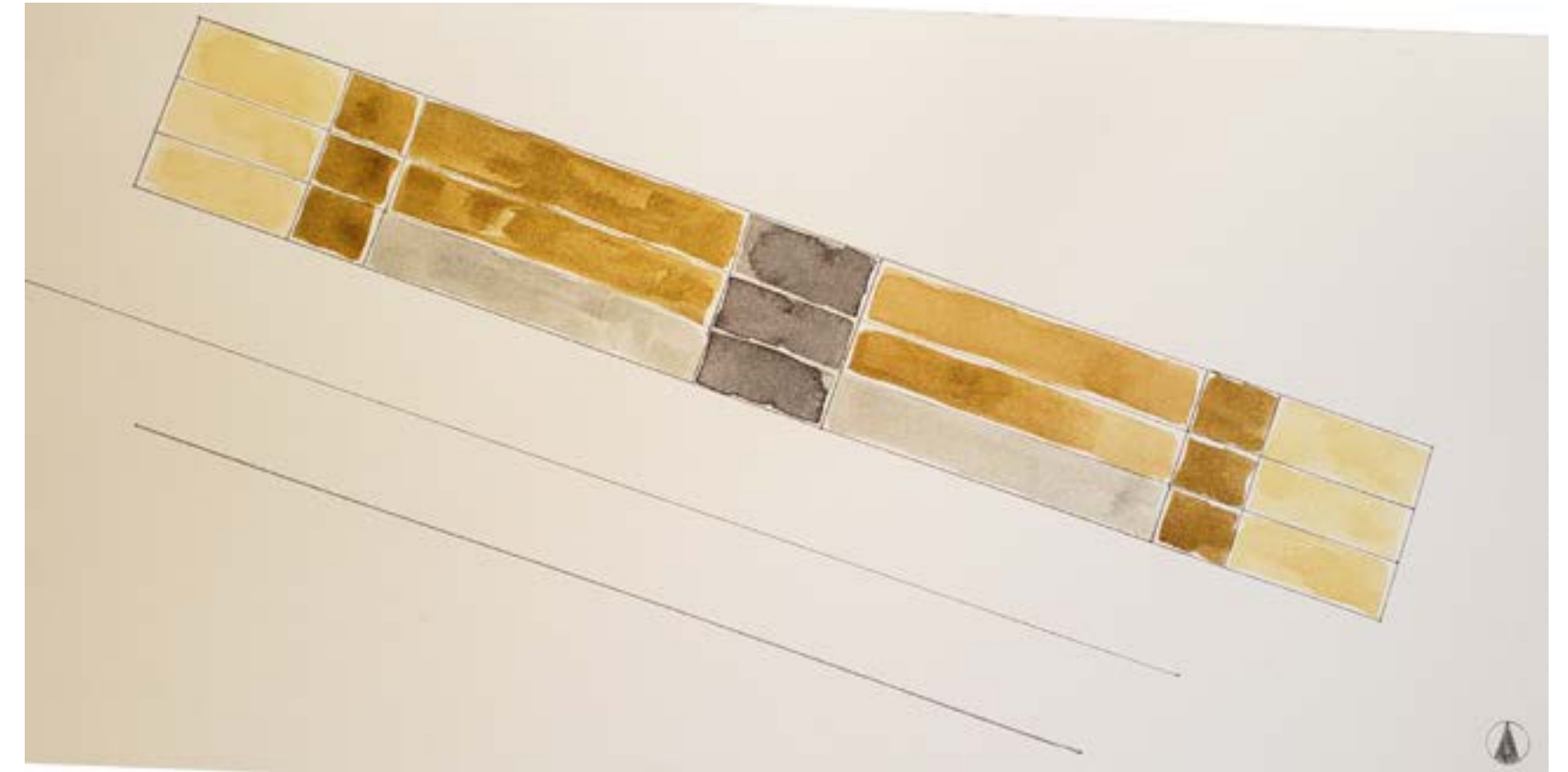
fixed private space (owner's suite) allocated for several essential activities that includes sleeping, gathering, living, + working. boundaries are static and not shared with other rooms.

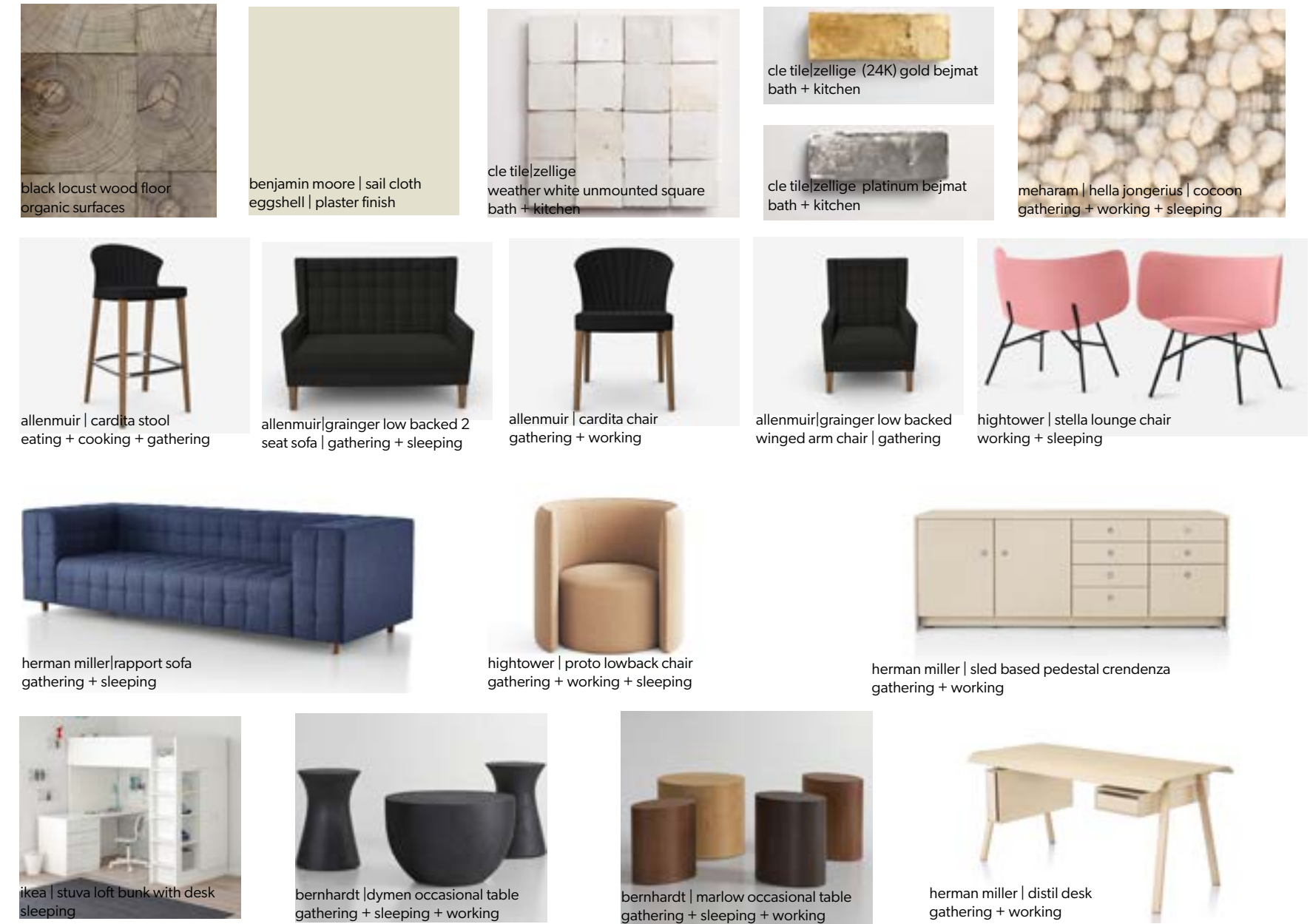


fixed public space where fixed objects (stairwell) defines the space. space is throughout the residential unit. pseudo partitions designate the space, particularly lighting and architectural details.



adaptable public space that is allocated for sleeping while also being palatable for other essential activities based on the user. these activities include working, living, gathering. high polyvalence, room boundaries are fluid but able to private. natural light is preferred and provided.





defense presentation



photo credit: ltmoon, ph.d.

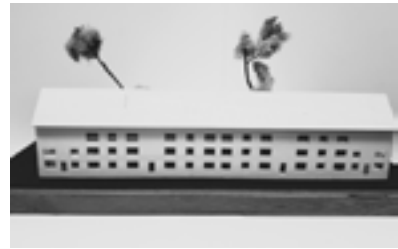
relief • revival • reincarnation

ides thesis • ltrmoon • 562022
project statement

the project seeks to improve the livability of the interior environment in public housing residential units by emphasizing the design elements of light, depth | dimensionality, circulatory liberation, balance and symmetry, recession, and spatial adaptability in the critical living areas (i.e., cooking, eating, bathing, sleeping, working, gathering) while preserving the historical context of the community. designing beyond the provision of safe shelter, this project will illustrate participatory design in a public housing community, such that a renewed sense of choice, autonomy, ownership, and connectivity facilitates increased community health and vibrance for a group whose housing opportunities have been limited by race and economics.

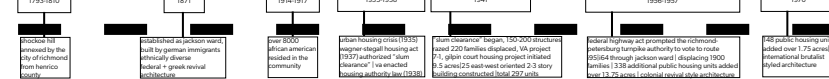
concept statement

the design concept embodies the processes of relief, revival, and reincarnation to magnify the importance of the interior environment of public housing residences.



HOUSING DEVELOPMENT	YEAR BUILT	TOTAL DWELLING UNITS	# OF ACRES
Glenn Court	1942-1957/1970	783	93
Harlow Court	1952	450	68
Coughlan Court	1952	504	85
Whitcomb Court	1958	487	77
Furford Court	1958	447	84
Motta Court	1962/1970	438	106
Olson Court	1963/1970	50	1000
Blackwell	1968	440	named 1999-2001

site history + evolution



site

200-224 west charity street, richmond va 23220
 gilpin court housing community
 richmond redevelopment housing authority
 VA project 7-2, VA project 7-3 (segregated projects)



site:
 historic north jackson ward, building constructed in 1941, colonial revival style, east-west oriented 3-story building, front gabled roof, + a central doorway for access to individual units, baskerville & son (VA project 7-2), merrill c lee & marcellus wright architects (VA project 7-3), charles j gillette, landscape architect
 adjacencies: state highway (1, 301), interstate 95/64, csx railway, almshouse



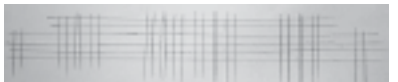
analysis



parti - circulation
 dense circulation patterns within units which demonstrates the relationship between occupancy, spatial compression + enclosure



parti - geometries
 smaller square forms within a rectilinear form demonstrates spatial compression, limited spatial relief, architectural standardization and severe uniformity



parti - datum
 strong vertical and horizontal datum lines serve to anchor and regulate the design, visual continuity and architectural symmetry and balance



parti - fenestrations
 fenestrations parti suggests a limited number of small windows + doors, some misaligned which impede light and air circulation



parti - geometries
 smaller square forms within a rectilinear form demonstrates spatial compression, limited spatial relief, architectural standardization and severe uniformity



parti model - geometries
 model suggests rectilinear forms, regulated datum lines, and uniform symmetry which emphasizes architectural order, conformity + regulation

concept • program

conceptual drivers

users	building	program
homeplace is... warm comfortable secure + safe accessible equitable + comparable private valued permanent + stable refuge + retreat personal belonging communal	homeplace is... dense symmetrical inflexible + rigid orthogonal + rectilinear massive industrial + impervious institutional i need asymmetry hierarchy variety in geometry variety in materiality harmony rhythm + syncopation flexibility + adaptability	homeplace is... permanent + stable connected valued honorable elevated private communal light filled preserved equitable comparable flexible + adaptable accessible refuge + retreat inspire belonging



concept models
 puncturing a plane results in increased light, air, openness, circulation, spatial + visual continuity, structural volume, + horizontal + vertical spatial edges

conceptual influence

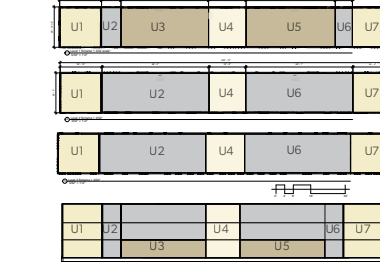
polyvalence vs. determinism
 concept influenced by the precedence of herman hertzberger's theory of polyvalence. it is the capacity to design a versatile communal living space that is adaptable rather than flexible. in this case, adaptable is defined by the occupant preferences without adjusting the way it has been constructed. the theory contradicts the foundational principles of determinism which prescribes how the space is supposed to be used. deterministic principles reduce the likelihood that the end user has a sense that the space "belongs to them".

adjacency matrices



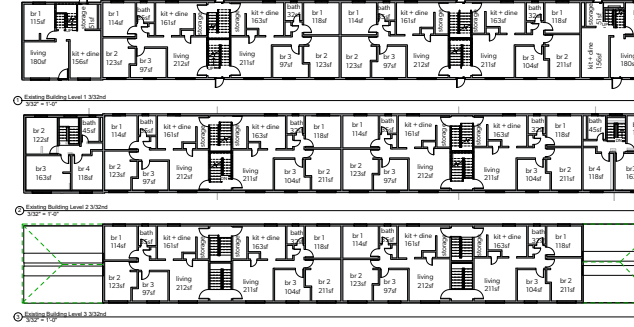
matrices provide iterations of polyvalent spatial configurations that include fixed + adaptable spaces as well as private + public spaces.

block plans scheme 1



design question 1 does the design (1) improve the livability of the entire space (risking displacement) or (2) improve the space as it exists, addressing the elements of livability developed a series of schemes to respond to concept and theory while examining the issues of density, compression | relief, circulation, geometries as well as pre-existing issues social issues that emerge from situations of economic scarcity + material hardship.

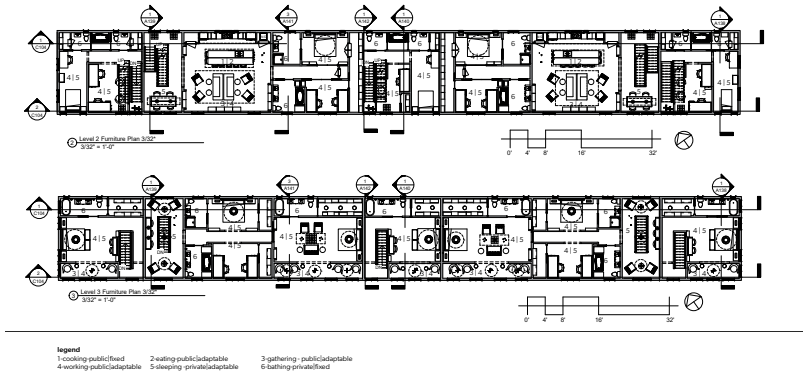
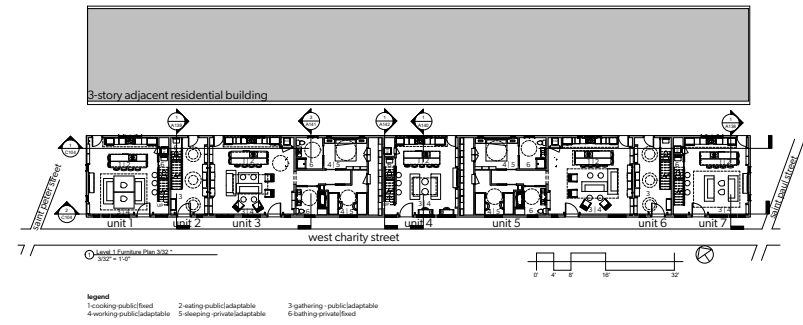
existing building



total units | 14
 total occupancy | 44
 2 4 bedroom 1 bath multilevel approximately 886 square feet
 12 3 bedroom 1 bath single level approximately 796 square feet
 building specs |
 concrete floors and ceilings
 linoleum kitchen + bath
 cmu block walls
 double hung windows
 metal exterior doors
 residents |
 approximately 983 adults
 1200 children under age 17
 predominately women
 97% african american
 median annual income under \$10K
 spaces specifically designated

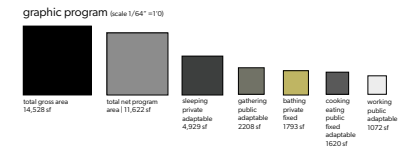


design development - plan

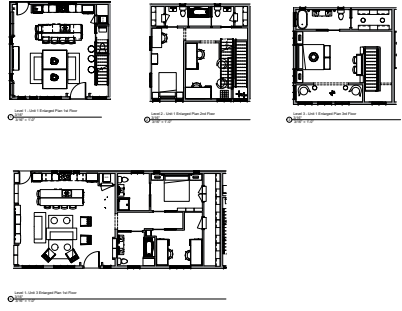


total units | 7 (50% unit reduction)
total occupancy | 23 (48% less occupancy)

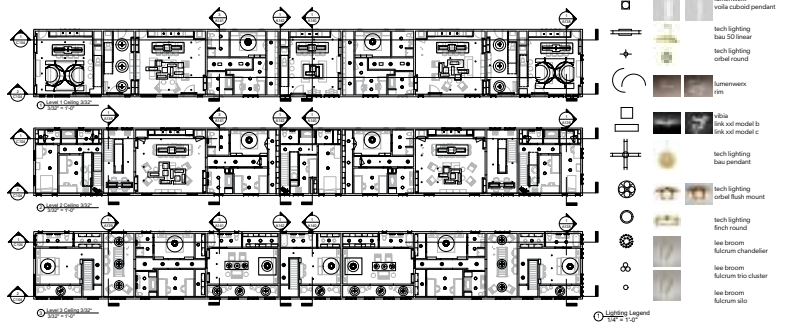
- 2 private spaces for sleeping + 2 baths approximately 1344 square feet
- 3 units with 3 private spaces for sleeping + 3.5 baths approximately 1584-1728 square feet
- 2 units with 5 private spaces for sleeping + 5.5 baths approximately 2976 square feet



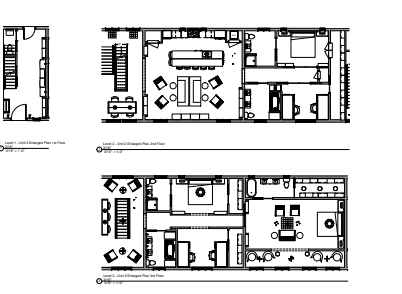
enlarged plan views | unit 1 + unit 3



design development - rcp



enlarged plan views | unit 2



design development - section



reflections

this project was inspired by my curiosity about people, their values, and their most intimate environments.

i learned so much through academic study but i learned even more by immersing myself into the community. visiting, walking, engaging, and observing. this design approach is so much more robust and allowed me to develop an empathic perspective that cannot be captured in books.

the thesis defense comments provided direction for next steps that includes the creation of 7th polyvalent space - a private entry that immediately establishes a sense of control and ownership with the end user (lexy), the importance of multi-generational adaptive residential design (sara), broader interpretation and application of Hertzberger's polyvalent concept (camden), value of preserving existing neighborhoods (lexy + kristin + sara), developing modular furnishings that support the design and polyvalent concept (camden), the importance of challenging the status quo of multifamily residential design such that we offer design that accommodates the end user (emily) and the subtle nuances of maneuverability and circulation in families with children (roberto). camden reminds me, design is a "superpower" that can be used to persuasively dialogue about the issues of poverty and housing.

this project is the beginning of a meaningful investigation in the design profession, while also impacting people who struggle with scarcity and material hardship. i hope to continue the conversation through design.



photo credit: ltmooon, ph.d.

references

image credits

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photo credit: Itmoon, ph.d.

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