



RETURNING HOME

*Collective Dwelling through
Incremental Architecture*

ZACHARY NELSON | AUGUST 2022 - MAY 2023

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RETURNING HOME
COLLECTIVE DWELLING THROUGH
INCREMENTAL ARCHITECTURE



a design thesis for:

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by:

Zachary C. Nelson

in partial fulfillment of the requirements for:

the Degree of Master of Architecture

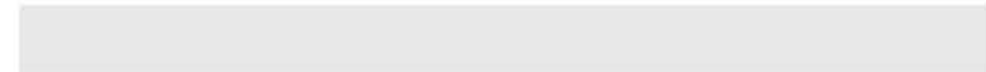
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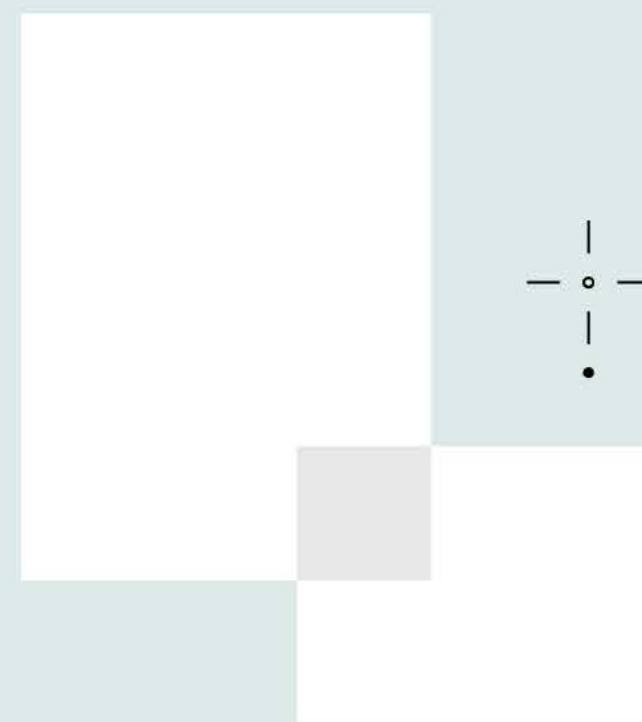
To the friends I've made through the architecture program, through music, art, or just by circumstance during my time at NDSU, thank you for your camaraderie and kinship that we've developed together. I've felt like a more reserved person since leaving home for college, but you've all been able to make me feel at home here at NDSU. When I first came here, I couldn't wait to be done with school and get back out of the area - now as I'm weeks away from leaving to go off into the world and practically done with my schooling here, I wish I had more time left in Fargo.

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**PROPO
DSSALL**



ABSTRACT

Thomas Moore defined home at three scales: the psyche which shelters our souls, the physical place that we make domesticity in, and the broader metaphysical context in which we find our culture, history, and selves within. Today however, **housing in the United States is birthed by economic interests, creating modernized "units" that are detached from humanity and the way we dwell.** Consequently, the "American Dream" for new generations has been disintegrated, and our built environment has lost its ability to relate to the broader contexts of our lives.

To combat the consequences of an inflating housing market, **the federal government has created economically reductive social housing projects, exacerbating the issue through "efficient" architecture** and inhumane impositions that manifest even more inhumane conditions. The most notorious examples of this approach are the failed housing projects at Pruitt-Igoe, in St. Louis, Missouri.

This thesis reexamines the process of creating home as one intrinsically related to dwelling. By providing a community with foundational facilities to support its growth over the old site of Pruitt-Igoe, this project explores the possibility for incremental interventions across the site that may be developed to create tangible connections between the residents themselves and the broader context of home at its various scales.

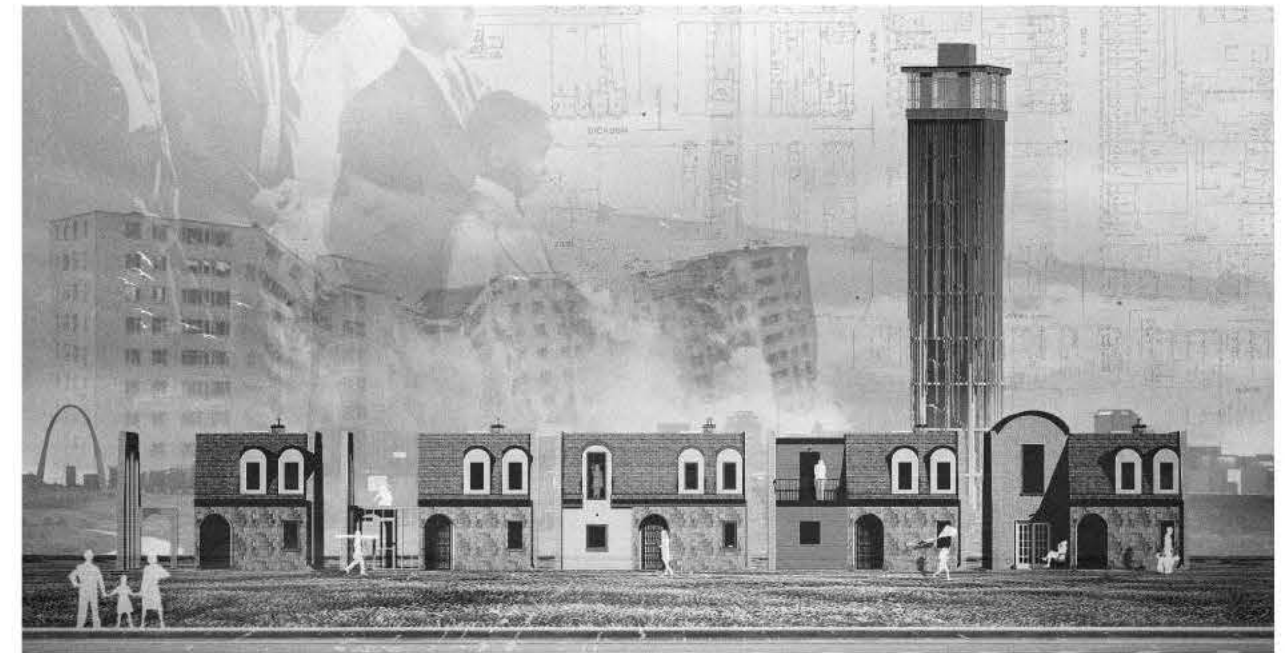
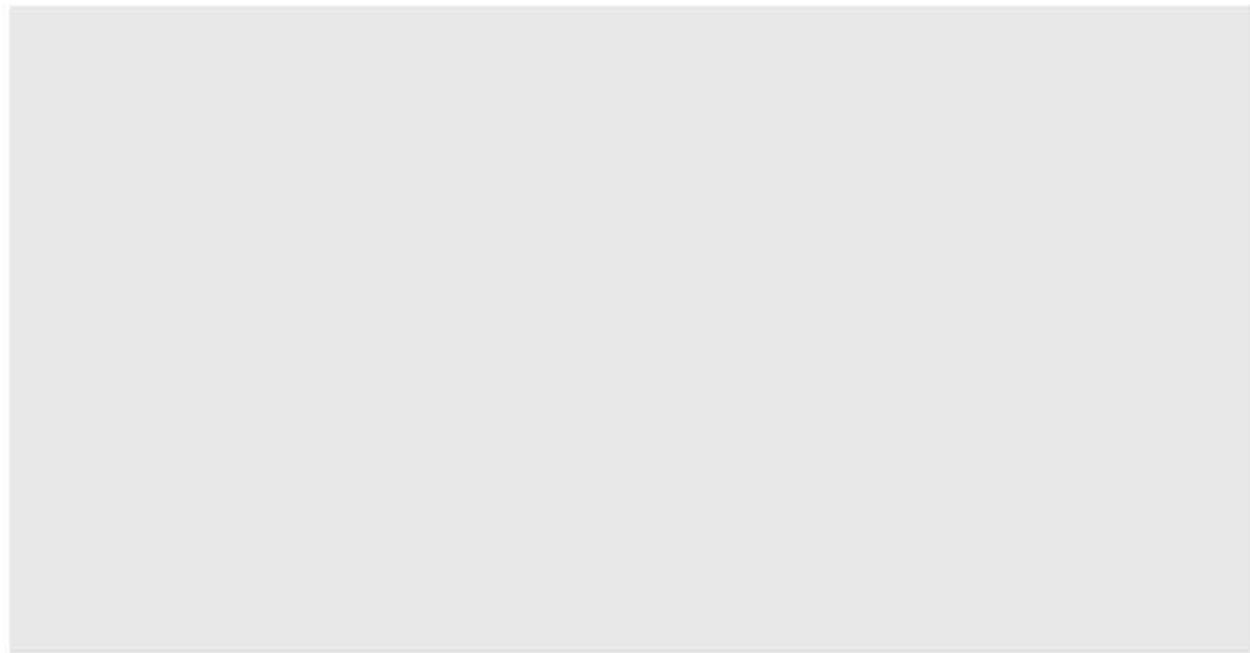


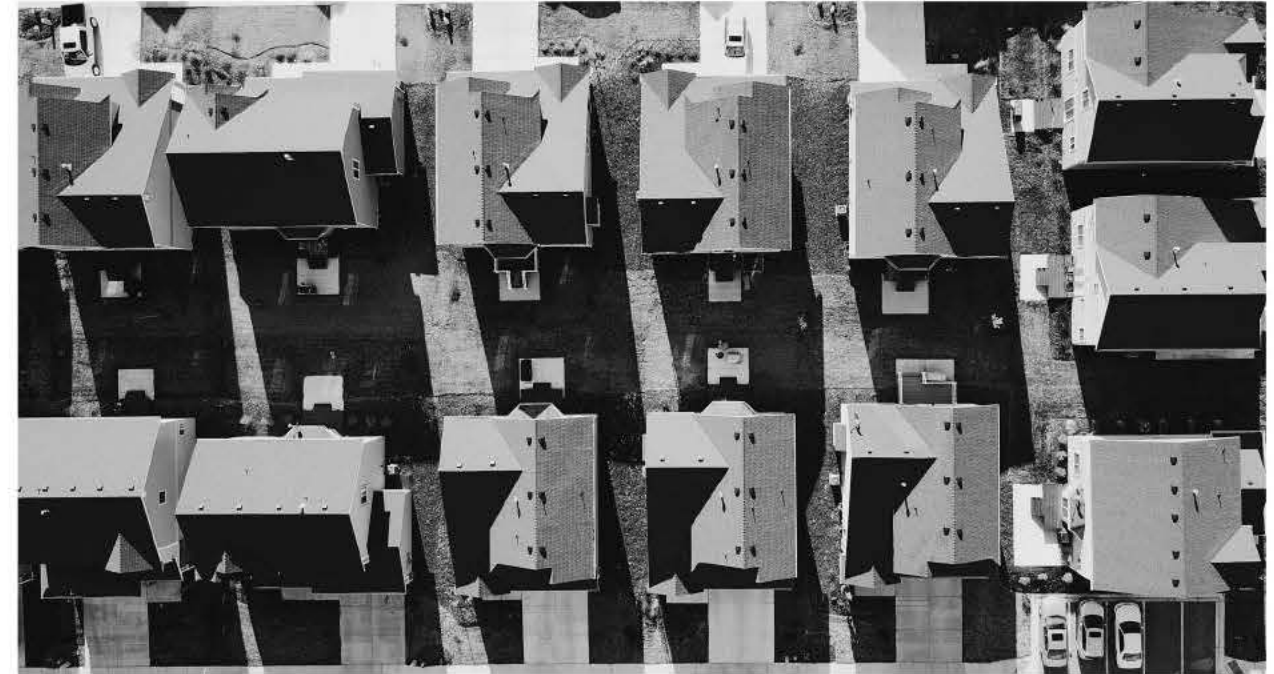
Fig. 001 | Incremental Dwelling intertwined with Space & History

NARRATIVE

While our culture has developed, architecture as a profession has evolved from one that combined culture and craft into a representational built environment for a given society, to one that focuses on creating documents that represent a technically sound, efficient, and profitable final product irrespective of the cultural context around it. Architects have helped to design structures in our cities that have become bland gravemarkers for the communities and cities that were demolished in the form of largely unused and empty malls, apartments, warehouses and so on. The American Dream of becoming a successful property owner who can support a family and themselves through the fruits of one's labor has fed into the evolution of how we build our cities and live amongst one another. Examining the middle of the last century, phenomena like white flight and "slum" clearances were destructive segregating forces that occurred for the sake of realizing the dream for the dominant class of white bourgeois Americans, generating suburban sprawl and isolating socioeconomic classes and racial groups from one another as a result. Today, our increasingly inflated economy has widened the wealth gap as lower classes perpetually are pushed downwards beneath mounting bills and missed opportunities for class mobility that have slipped beyond their reach due to more and more increasing cost barriers. A general sense of dissatisfaction bleeds into the upper class as well, but it does not come from those suffering below them. Instead, **dissatisfaction is brewed and poured over all of us by our housing crisis.**

The housing crisis experienced in America has been the result of multiple factors, but is often talked about in terms regarding quantity of resources and housing available, as well as costs or profits that would be incurred or made from the structures that we take up home in. Rather than limiting the scope of this crisis to its economics, I believe in redirecting and expanding the topic to examine homelessness and the ways in which we could be considered "housed", and argue that even homeowners who possess physical shelter may very well be homeless themselves as a result of factors within the expanded scope of this crisis. We occupy homes besides those of just our built realm; we find "homes" in our internal psyche's and social "homes" amongst others around us.

Fig. 002 | Houses from above | Blake Wheeler via Unsplash



As architects, we play a vital role in how the built environment serves to house the people we build for. While there are over half a million people in the United States that experience physical homelessness each year, there are another 327 million Americans who are housed but still homeless in a social context, and many even in their psyches, as a result of the soulless and cultureless built environments that we have created, as well as the evolution of individualistic values. **In order to rehouse those half million who are without shelter, we must be able to foster a culture that values the philanthropic collective efforts to support them** rather than one that would have the poor and needy "pull themselves up by their bootstraps". When architecture is built through a humanitarian and culturally responsive lens, it has the potential to open up spaces of interpretation and connection for people and cultures that can then lead to a cultural enriching of and positive change for entire communities. This sort of humanitarian practice of creating spaces should be applied to how we create housing, in order to allow for the possibility of ensuring that none of us is without a home.

JUSTIFICATION



Fig. 003
A homeless person walking
AR_ via UnSplash

Individualism in western American culture has spurred the disintegration of our human connections to one another, and left each person fending for themselves in our society's context. Interventions to create social safety nets by the government have been historically crippled and criticized, leading to their continued deterioration in the realm of public perception as well as their funding and ability to support the people that they're meant to. While the government's purpose is to provide for its people, it's unable to do so if taxpayers are not willing to spend money to provide for the people in need of support. Initiatives like social housing have been criticized and shut down partially as a result of collective individualist outcry against it, despite the successes of well funded similar programs abroad. **How are we to address homelessness if free shelter for unhoused people is off the table?**

This vetoing of housing as a solution is the result of factors that combine with our individualist attitudes. The capitalist organization of our economy has set the stage to cast housing as a function for investment rather than one for living and dwelling in. As a result, we see artificial scarcities in housing caused by investors buying up properties to rent out at increasing rates for increasing profits. These inflated costs and scarcities lead to pushing people out of the housing market and onto the streets.

Now, there are hundreds of thousands of people who are without physical shelter, and hundreds of millions more who are sheltered but alienated from one another and within society as a whole. **There must be a shift in the way we build our environments in order to rehouse individuals both within physical shelters, and the metaphysical spots that we're meant to occupy within the context of life and the world around us.**

EMPHASIS

REPRESENTATION

In order to open up the opportunity for interpretation and connection through a space, I will employ symbolism and attempt to reinvent metaphorical representations that users can recognize and relate to through the process of their own interpretation and reflection, in order to supplement the cultural emphasis of my project.



HOME & HOMELESSNESS

This project will deeply examine our established definitions of home, and through that examination will constitute what defines home and homelessness. While we readily recognize shelter and the lack thereof as a primary form of home and homelessness, we don't give attention to the oneiric or metaphysical homes we occupy within our own psyches and among our living contexts. I will describe these other modes of home and justify how American culture is contributing to its erosion of those homes.

OPPORTUNITY

The foundation for any sort of equity begins with establishing a secure space to call home. Each person should be sheltered, feel at home with themselves, and feel connected to the people around them. The stability we derive in our lives from having a space that we can claim as home opens the door for us to pursue opportunities for socioeconomic mobility that is the key for an equitable society. This thesis work will seek to guide architectural design towards creating spaces that open up the possibility for being at home in every definition of the word.

AGENCY

I will develop architecture and architectural methods that enable agency for its occupants through their involvement in its formation, in order to better serve the people that the architecture is for. By practicing architecture in a way that engages occupants, I'm hoping to enable people whose homes are being built to manifest their dreams into their built environments, and create a more fulfilling version of home for the end occupants.

Fig. 004 | Different walks of life



TYOLOGY

The only direct solution towards any sort of housing crisis is domestic shelter. This project will use **social housing** as a tool for not only giving the homeless a home, but also as a tool to develop healthy identities and communities. The construction and design of this project isn't intended to create a rigid utopia derived from a single author, but instead the project intends to allow for incremental construction by the community that inhabits it through modular connections to space for additions. In this way, the complex comes alive and will begin to speak back to the inhabitants the more that they grow in it and make it their own. To aid the growth of the community and help generate new connections within it, a **cultural center** of sorts will exist on the site amongst housing, in the form of gathering spaces, group gardens, areas for lounging, areas of creation, and places for exhibition and interconnection, with **natural interjections** scattered throughout the structures to soften them.

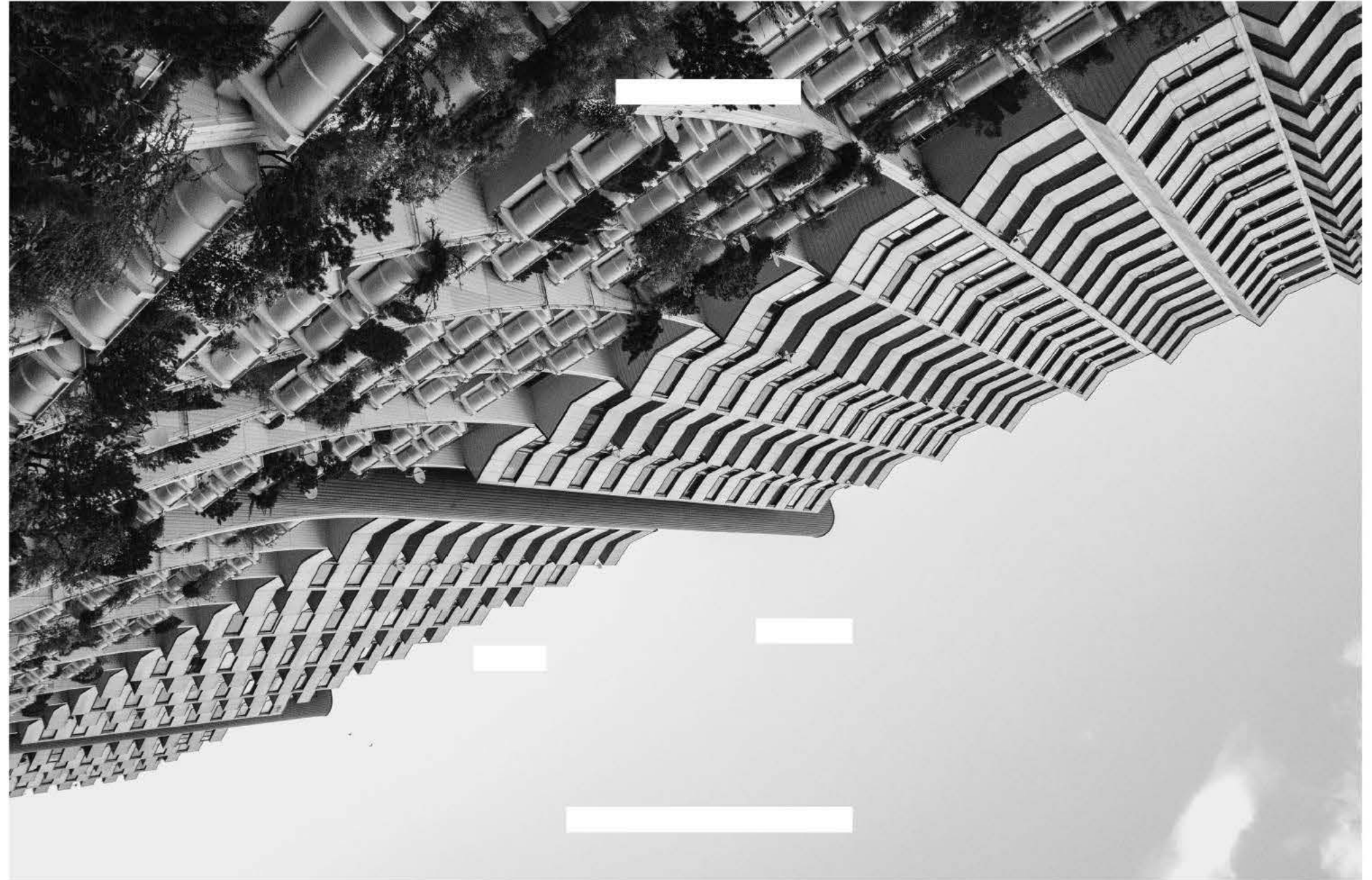


Fig. 005 | Alt-Erlaa social housing complex | Nick Night via Unsplash

PROJECT ELEMENTS

HOUSING

Units of shelter that provide space to dwell and grow with; living, kitchen, beds, and baths. Space to house up to 6,000 occupants at a time across the site. Modular voids for organic growth through expansions.

FLOW

Natural corridors of egress, formed organically based on optimal paths of travel rather than an imposed grid, as well as points of congregation and rest; Sidewalks, hallways, lobbies, lounges areas, and atriums.

EDUCATION

Space to gather, learn, create, and grow; offices, classrooms, conference rooms, as well as exhibition stages.

SYMBOLISM

Architectural representations for culture and healthy dwelling, using space, form, texture and colors, in the pursuit of opening up a space for interpretation and personal metaphorical generation for all users.

ARTS

Spaces for creation and exhibition to uplift and connect communities, as well as deepen cultural ties and employ symbolism as a tool for change; galleries, performance halls, studios, and support spaces.

UPKEEP

Space for storage and operation of maintenance facilities and custodial duties; mechanical, electrical, storage, and waste management.

Fig. 006 | Painted balconies on an apartment | Ryan Lau via Unsplash



COORDINATION

Areas for congregation and leadership of housing participants, cultural planning, and site operations; offices, conference rooms, reception areas, and lounge space.

GREENERY

Natural foliage planted in and around the structures of the site, softening the hardscape of manmade structure; a community garden, accentual placement of native plants, and miniature pocket parks around the site.

USERS

INHABITANTS

Individuals of multiple different socio-economic backgrounds, ranging from those who are unable to financially participate in a regular renter's or buyer's market, all the way up to those who would otherwise be property owners or landlords themselves. The project will provide living situations that include needs and amenities for all of its occupants equally, creating an equitable environment with unbiased opportunity for the growth of its entire community.

EMPLOYEES

Directors, architects, builders, educators, coordinators, artists and exhibitionists, as well as maintenance, custodial, and management staff.

THE COMMUNITY

People who dwell both in as well as around the site, and the greater population across the rest of the country. The greater goal of this project is to impact the culture of our communities, and to bridge the physical gaps we may have between one another with metaphysical connections that we can generate in spaces of culture and civility.

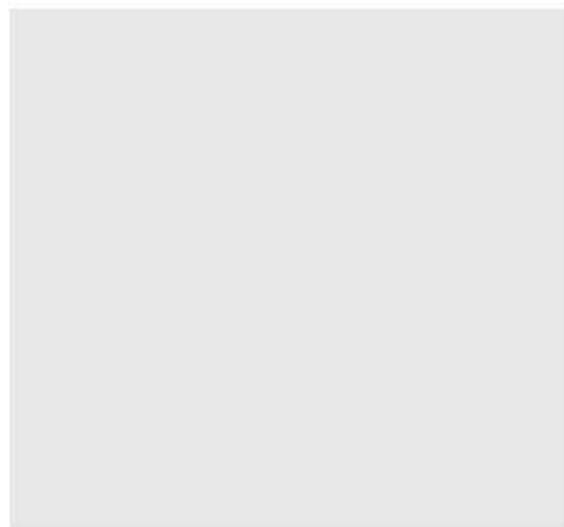
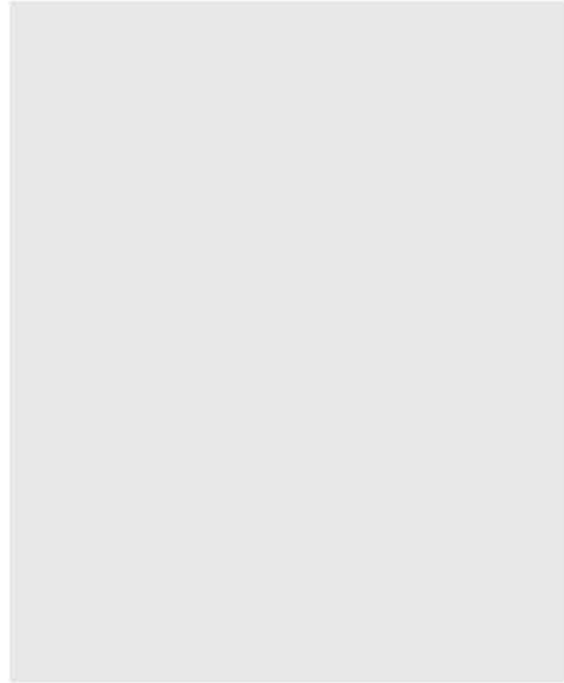


Fig. 007
Citizens at a crosswalk
Mauro Mora via UnSplash

SITE

Old Site of Pruitt-Igoe
Carr Square
St. Louis, MO 63106

The proposed social housing project will occupy the modern day site of **Pruitt-Igoe, in St. Louis, Missouri**. The reason for its selection is its historical significance within the field of social housing and the opportunity that arises for its critique by building over it, as well as its surrounding context of low income households and historically disadvantaged people that may be missing the opportunity for any socio-economic mobility.



United States of America



Missouri



St. Louis

St. Louis population:..... **293,310**
 Median household income:..... **\$45,782**
 Average age: **36**

Site size:..... **35 acres**
 Primary access routes:..... **Jefferson Ave & Cass Ave**

Fig. 008 | Aerial view of site context



Carr Square, north west side

Fig. 009 | Aerial view of Pruitt-Igoe site

$38^{\circ}38'35.3''$ \parallel $90^{\circ}12'37.2''$ \parallel

GOALS

ACADEMIC

I'd like to use this process of research and design to fortify my own skills in collecting and organizing data, critical thought and application of my ideas, and my ability to demonstrate my creativity in multiple different mediums of expression. When I've finished this project, I'd like to look back at it and have fulfilled the potential that I've envisioned for it from the birth of its concept, as well as view it as the crowning achievement of my education, culminating and adequately representing all of the skills that I've acquired throughout it.

PROFESSIONAL

I want my research and critique of how we view and treat housing in America to be impactful and meaningful enough to force other professionals in the field of design and architectural development to reevaluate their own perspectives on it. I believe we need more people in our profession creating for the greater human condition than for personal gain. In addition to solidifying and presenting the reasoning behind my values, I want this project to round out my abilities as a designer and reinforce my skills applicable in the professional realm. Through these professional gains, I want to establish the foundations for becoming a leader in our field, rather than just a contributor to others' visions.

PERSONAL

I have a deep well of passion for the values I express in my reasoning for this project, and I want to both reinforce them for myself and establish a heightened ability to communicate and share them with others. Through my process of learning and growing during this process, I hope to find more of my own values and passions nestled within this topic, as well as deepen the connection I feel to my work and to the people I create it for.

PLAN

RESEARCH DIRECTION

THEORETICAL PREMISE

The creation of shelter can be reframed as a humanistic endeavor, rather than an economic one. Architectural representation and spatial creation has the opportunity to foster change for the people who experience it, both at a personal level as well as on a wide-scale community level. Through recognizing and addressing the cultural limitations we've imposed on ourselves through a collective reverence for individualism and hedonism in America, the design of this project aims to enable the cultural change necessary to support the collective empathic action of creating and maintaining social housing within our communities.

POLITICAL & CULTURAL CONTEXT

Throughout my research moving forward, I aim to find the political and cultural factors contributing to the successes and failures of various examples of social housing across the world. I plan to examine these factors in different economic organizations, cultural settings, and geographic locations. In doing so, I will establish the arguments for the perspective I hold on social housing, and solidify my theoretical premise and the reasoning behind my approach to the problem of homelessness and disparities among socio-economic classes.

PRECEDENT STUDY

Research and comparison of multiple case studies of these typologies will be used to establish direction for the eventual design. Additionally, site specific conditions will be evaluated to supplement this research and ensure its success in real conditions.

RESEARCH DIRECTION CONTINUES...

PROGRAMMATIC NECESSITIES

Demographic study of the site's surrounding population and examining case studies of similar populations will establish the necessary design deliverables and design qualities for creating a successful project, as well as help identify the optimal typology for cultural representation and the creation of opportunity for socio-economic mobility for the occupants within and around the site.

SITE ANALYSIS

Additional research of the site's physical attributes will be conducted, in order to optimize the final design's layout, forms, and utilization of the site's resources, including physical space, foliage, light distribution, thermal gain, access to public amenities, and accessibility to inhabitants and visitors.

DESIGN METHODOLOGY

PRINCIPLED DESIGN

Using established methods of form generation will contribute to optimal design of the final product and its representation of values established in my research. I will refer to principles established in historic societies that have generated culturally significant and iconic representations of architecture, such as the ancient Greeks, Palladians, Egyptians, etc., and study their concepts of design such as order, scale, proportion, biophilia, and so on.

HISTORICAL & PHILOSOPHICAL FOUNDATIONS

I will study philosophical concepts and historic precedents put forth by a variety of authors on subjects relating to home and homelessness. I will examine home as a mental, physical, as well as the metaphysical conditions we experience and contribute to as a society. Once these concepts have been established in my own research I will examine western culture, specifically dating from the French Revolution up until our current times, in order to wholly understand our current societal values. By doing this research and critique, I will establish the reasoning for my design and its own attributes.

PARTI MODEL / ARTEFACTS

Through iterative design of artistic expression and representation of the values I believe in, I will find insight to the forms that will be expressed in the final architectural design of my project, with the aim of these iterations being to find culturally relevant and impactful means of symbolism that can be re-expressed and visually communicated in our environments. The goal of this is to seek out stories, tie them together, and reinterpret them into something new and representational for an ideal or set of ideals that guide the final design of the architectural product for this thesis.

ITERATIVE FORM GENERATION

Using physical "rip & tear" models as well as modeling software, I will optimize the form for the final product of this project. With each iteration, I intend to analyze it through statistical analysis of software generated models across multiple different areas of study (sun studies, wind impacts, cost analysis, material resilience, etc.), and subjective interpretations of its form by myself, my advisor, and colleagues.

DOCUMENTATION

The process of research and design will be documented throughout the process of their generation, ensuring that the process leading up to this thesis's final iteration will be recorded and represented as much as its end product, in multiple mediums of documentation including both physical and digital ones.

ITERATION

- Artefacts of story generation and design direction.
- Models, both physical and digital, culminating in multiple simplified iterations as well as a detailed final model
- Periodic presentations of my research findings throughout the generation of my thesis

DISSEMINATION

- Submission to the North Dakota State University's Institutional Repository

PRESERVATION

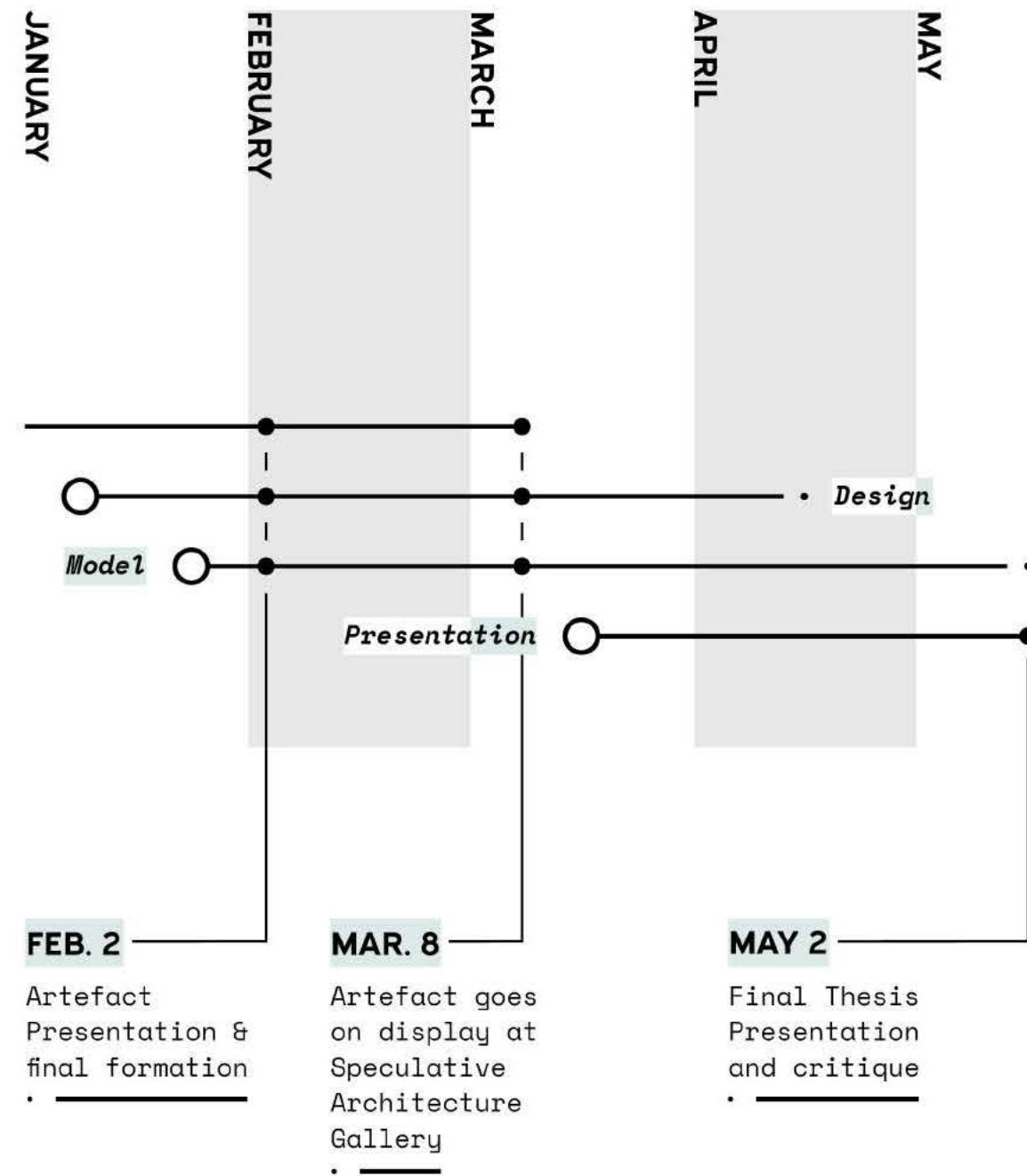
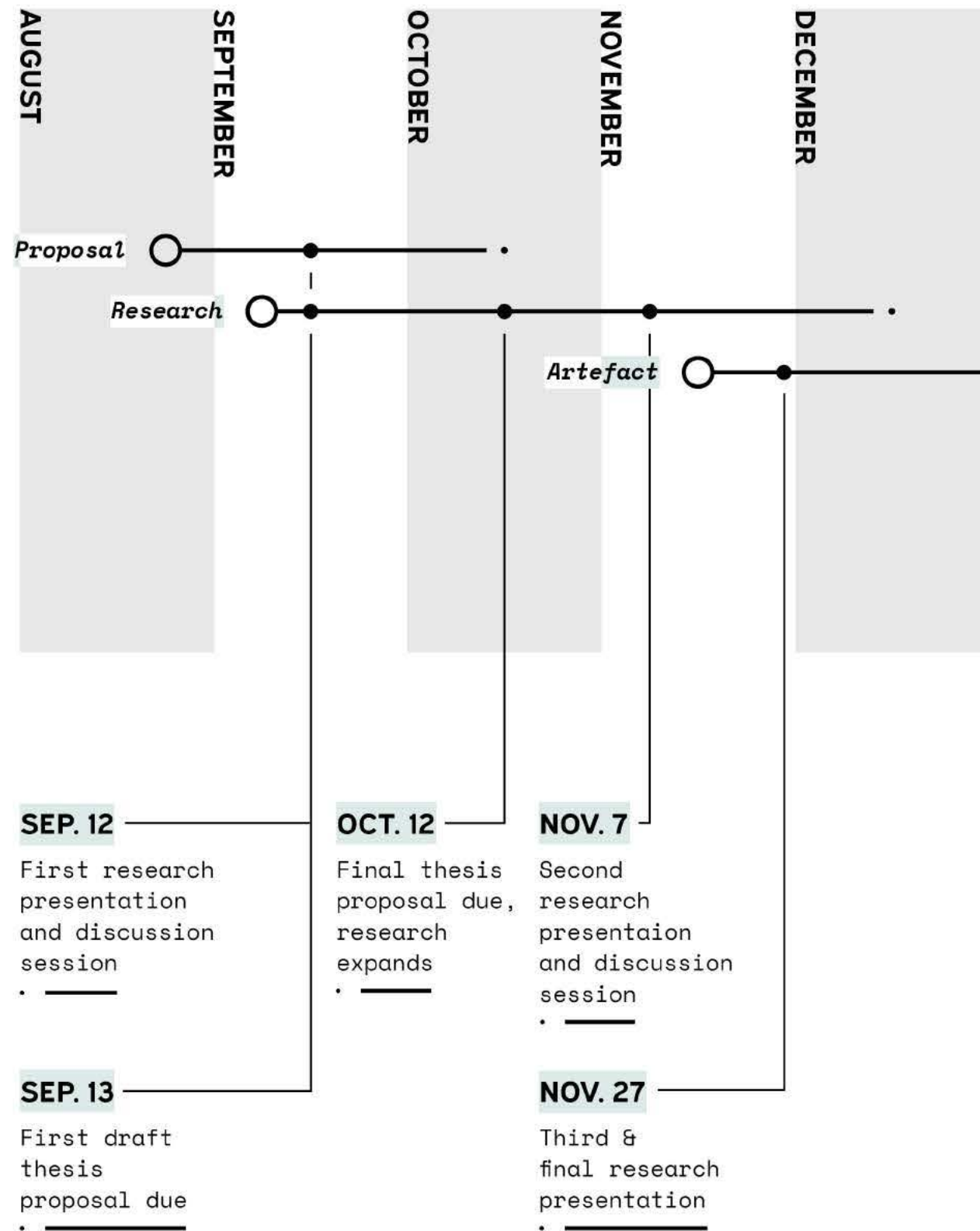
- Digital drawings and notes
- Scanned artefacts and models
- File backups
- Limited publication of a hard copy research book

PRESENTATION

- Final presentation and slide show
- Thesis design boards
- Archived imagery and graphic representations
- Thesis book hardcopy and PDF Intermittent research presentations

SCHEDULE

Fig. 010 | Thesis Schedule





RESEARCH

RESEARCH

CASE STUDIES

PRUITT-IGOE LEINWEBER, YAMASAKI, & HELLMUTH ST. LOUIS, MO 1954 - 1976

Fig. 011 | Original Pruitt-Igoe site model | The Pruitt-Igoe Myth

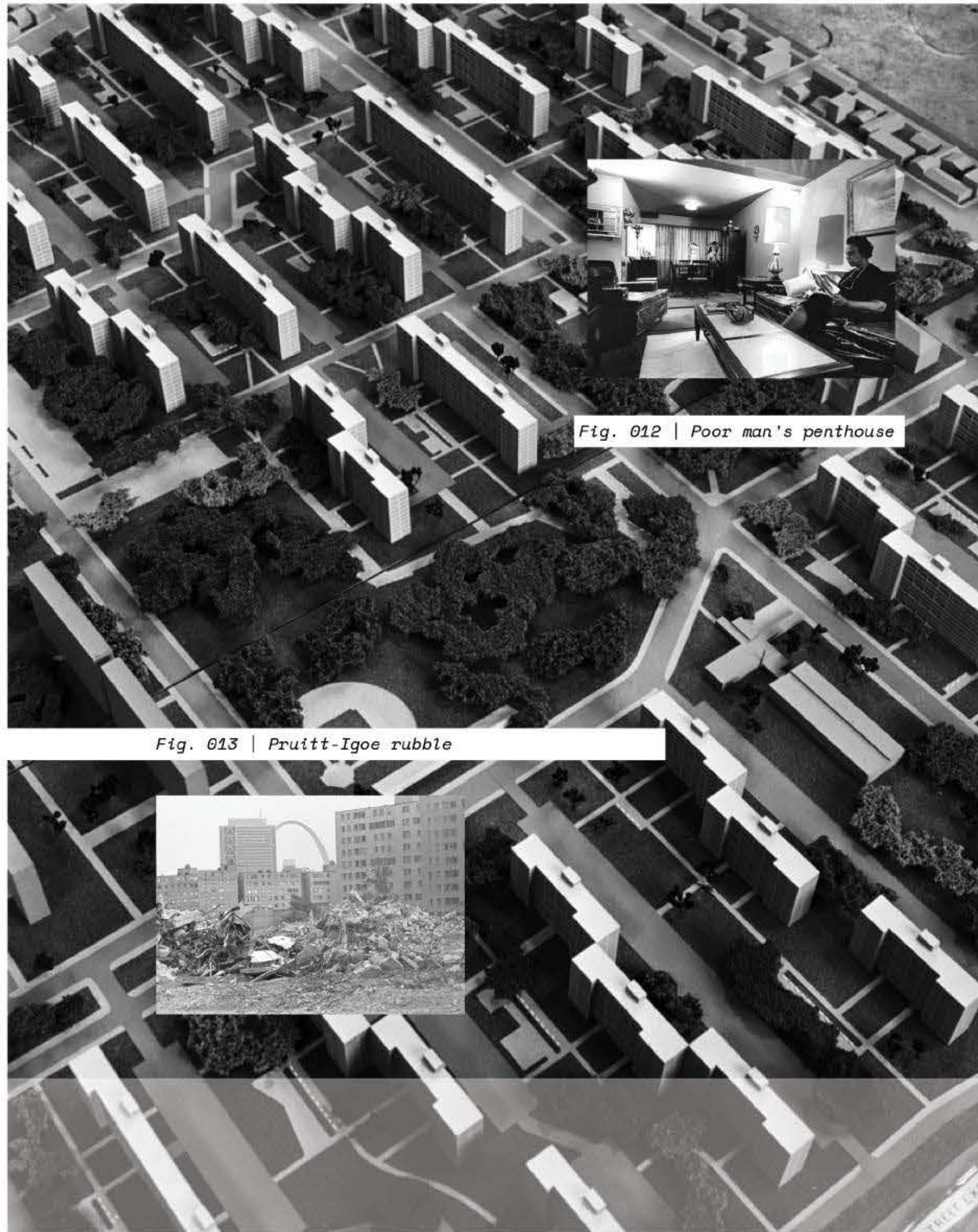


Fig. 012 | Poor man's penthouse

Fig. 013 | Pruitt-Igoe rubble

Pruitt-Igoe was one of several of the early social housing developments to be constructed in St. Louis following the signing of the Federal Housing Act of 1949. The legislation authorized funding for 5,800 social housing units to be put up in the city, in order to rehouse the working poor who would be relocated from St. Louis's slum clearances that were carried out in an effort to save the city center from urban destruction, much like many other metros of the mid 20th century. The design was led by local architect Minoru Yamasaki, under the supervision and restrictions imposed by the federal government.

Despite the federal authority's imposing, the development was initially a revolutionary success for urban renewal in the States. An early resident of the towers originally described her modest loft on the 11th story of one of the towers as a **"poor man's penthouse"**. In time however, the development would see mounting problems with upkeep and maintenance as funding for it dried up due to multiple compounding factors. The crippled and neglected complex became a hotspot for crime and vandalism among the low rise slums that it was surrounded by. By the 70's, many of the towers were mostly empty, with their windows shattered and walls broken to be stripped for wires.

While there were multiple efforts by several different parties to inject desperately needed funding for repairs and maintenance, **the development ultimately became a failure** and was forced into demolition. In 1972, the first of the 33 towers was brought down, and by 1976 the entirety of the complex had been toppled and ridden of.

Pruitt-Igoe's legacy is considered to be one of the largest failures of social housing in history and a mark for the "death of modernist architecture". Due to its shortcomings, opponents of public housing programs often cite the development when considering new programs to house disadvantaged individuals. While it was definitively a failure, the reasons for it failing have been debated widely over the last half century.

Fig. 014 | Play at Pruitt-Igoe | Henry Mizuki via the Missouri Historical Society



a revolutionary success for urban renewal?

The original intent for the site of Pruitt-Igoe was to create a sort of **modernist utopia**, with a variety of towers flanked with lush foliage and greenspace. Given the times, the towers were to be segregated by race into the Wendell O. Pruitt and William Igoe homes for whites and blacks respectively.

The restrictions put onto the design of the site made for equal height 11 story towers rather than differentiated mid rises, without any of the landscaping to flank the towers that had originally been planned. While the entire project was already hampered by budget restrictions for its ambition (the project cost 60% more than comparable social housing projects of the time at a total of \$36 million), influence from the local steamfitter's union led to an expensive heating system to be installed that cost the development large amounts in overruns. This **hampered budget made for cuts to simple amenities** for the building's functions. For instance, the elevators that were installed were called "skip stop elevators", as they would only arrive at the few levels that had gallery windows in the main area, to save money on the installation of egress systems throughout the entire building.

After the first couple years of the development's existence, Jim Crow era laws were abolished and segregation ended, allowing for residents of any race to live anywhere within the development. This, in part with the booming suburbs beginning to grow on the outskirts of the city, led to a phenomenon of **white flight** from St. Louis and Pruitt-Igoe itself. The housing population was roughly 60/40 black and white people, but by the 1960's was entirely black.

Because the complex was an island surrounded by low rise decaying buildings, there was no easy access to outside recreation, shopping, or general activities. The towers themselves became a hotspot for crime and vandalism within their corridors and stairwells. The crime and vandalism, exacerbated by a recession in 1958, caused vacancy rates to rise above 50% and rent delinquency to increase as well. Because the budget for maintenance and upkeep of the site was financed through rent revenue, these factors all fed into one another to form a sort of **reciprical loop** that would continually worsen until the end of the towers' time.

The site of the towers was initially left empty after their destruction as social housing programs in the United States made way for affordable housing programs instead. Two public schools were built on the south side of the site two decades after it's destruction, while the northern side of the site remained empty and eventually collected construction debris and became a landfill, later covered with overgrowth of trees and brush. The surrounding low rise slums remained for the most part and over time have themselves been torn down in blocks at a time to make way for new big box stores and offices in the city.

Fig. 015 | Pruitt-Igoe site plan | pruit-igoe.com

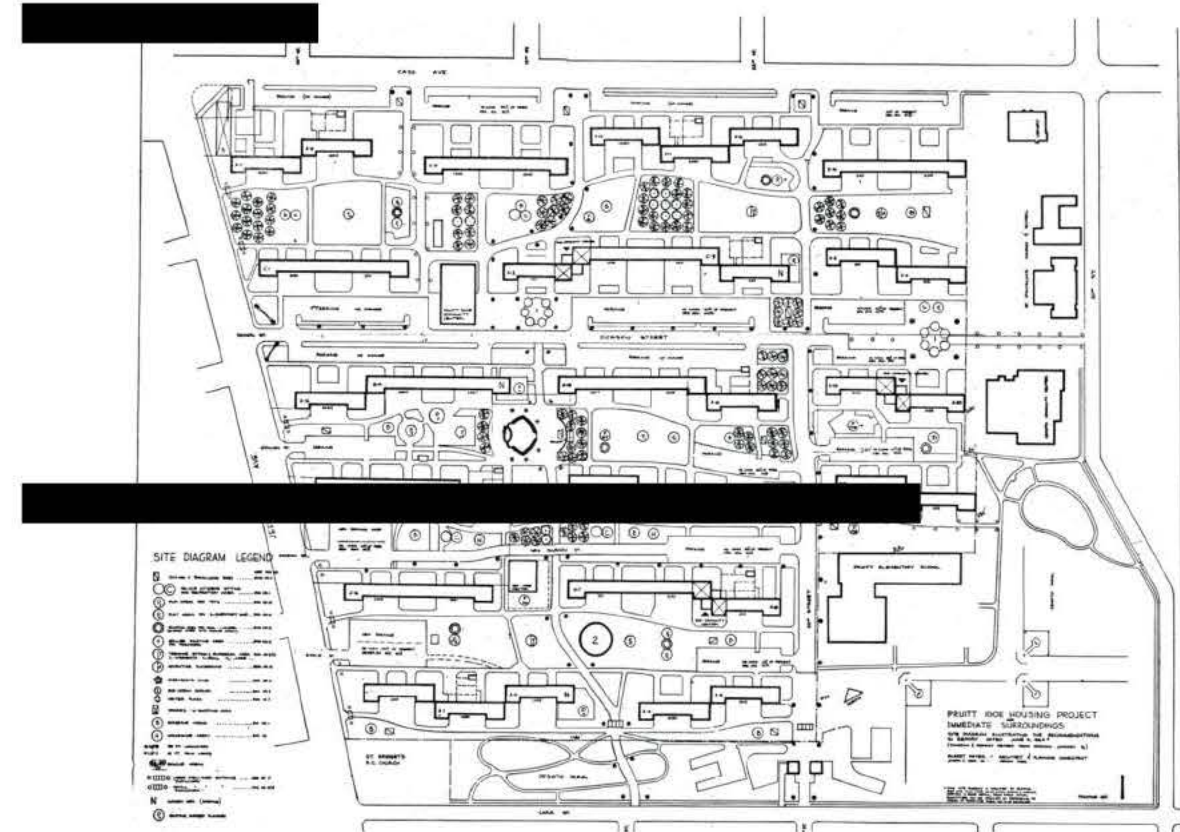


Fig. 016 | Pruitt-Igoe site in the 1950's

RELEVANCY

This is the most relevant case study possible for my intended thesis design. I will be designing new social housing on the site of the old Pruitt-Igoe housing blocks, so their footprint will be felt throughout the site. The failures of that project will be imperative to learn from in the development of my own proposal, as it will need to withstand the same criticisms that Pruitt-Igoe did itself. Not only can I draw knowledge from the results of the design, but I can also use the policy examples set during this project's failure as a guide for how to organize the function of a contemporary model for a similar typology.

REACTION

My opinion on Pruitt-Igoe is mixed. The intentions behind it were pure, but it was an abject failure without debate despite it having some positive characteristics. In general though, I find that the design of it seemed overly ambitious, overscaled, and pretentious in ways. The towers themselves were stark contrasts from the slums that surrounded them, making them symbolic of envy equally as much as they could be upliftment. At the same time though, **the aesthetic language of the orderly, bleak towers seemed to speak down even to those who lived within it. They stood grandly organized in lines, imposing on the horizon and blocking out the sun from the ground. It is not a place of shelter made by them but rather one that is made for them.** I feel that the buildings didn't speak to human scale and were incredibly harsh (especially without any landscaping). The policy behind the maintenance of the buildings was additionally unsustainable in the way it worked with vacancies and rental delinquency. A project of this scale for the benefit of society can't wind up being hampered by financial strains imposed by preventable factors.



Fig. 017 | Family looks out gallery windows | The Pruitt-Igoe Myth



Fig. 018 | Decayed Gallery | The Pruitt-Igoe Myth



QUINTA MONROY

ALEJANDRO ARAVENA, ELEMENTAL
IQUIQUE, CHILE
2003

The housing development at Quinta Monroy in Iquique, Chile, was built out of the necessity for formalizing ownership and providing a new, safer, cleaner, and more organized area to call home for the people who had been occupying it. After Chile transitioned to democracy in 1991, it began to reevaluate social housing policies and began initiatives to house the less fortunate throughout the country with several different projects. The people at Quinta Monroy had built what were essentially favelas, overcrowded and unsafe. When the land owner of the space they were on died, they were at risk for being evicted by the city, so they applied for housing subsidies and the social housing project was born in 2003.

Designers at ELEMENTAL were selected by the Chilean government to create housing for the residents of the area. The costs involved with creating housing for these people were severely limiting, as the subsidies granted to the residents were enough to cover the purchase of the land they were on, but then only left **about \$2500 USD per household to build shelter** (The national average subsidy in Chile per housing unit was \$10,000 USD).

To provide the amenities that standard middle class housing typically offered despite budget restrictions, **the solution harnessed an incremental approach, and the architects built 93 “half houses” that contained only the most necessary amenities and spaces.** These were organized in a modular fashion around 4 courtyards in a way which enabled residents of each house to build additional spaces onto their original structures.

While ELEMENTAL’s incremental approach has shown success - **all but one of the original 93 houses have been expanded and filled out by residents** - it has begun to suffer from similar problems to those experienced by the residents before they had formal ownership and structures provided. Sixty of the expansions have exceeded the 750 square foot boundaries that were originally intended for them, leaving structures bloating into public spaces and cantilevering over the courtyards. Additionally, subletting within some of these houses has led to individual structures housing up to 11 people at once, creating the same overcrowding issues that existed within the boundaries of the block before it’s redevelopment. The courtyards became conflicted areas over claimed ownership as houses expanded further, hurting the community ties that had been developed beforehand. **While the architects had planned to organize the structure of the space, they overlooked the governance of people and resources within it.**



Fig. 020 | Half houses | Estudio Palma



Fig. 021 | Two halves make a whole | ELEMENTAL



Incremental Living

The design for the half houses at Quinta Monroy actively encouraged the expansion of them, while doing the most that it could as a foundation for additional house to be built onto. Designers at ELEMENTAL understood that if their incremental approach was to work, then there needed to be solid guidelines in place to help enable the residents to expand in an organized fashion. Their ultimate vision was for the residents of each house to **have agency** in the construction of their home, and thus **develop strong ties to the environment** that they live within.

Each half house began as a simple ground and two upper floors, with plumbing preinstalled and the most difficult construction processes for a shelter taken care of. The houses were organized together into a porous series of masses that would allow for infill from expansions to eventually make a series of continuous buildings composed of multiple different dwellings.

The success of this project shortly after its conception propelled its lead designer, Alejandro Aravena, into fame and made him a sort of “starchitect”. This praise came at a time when the social housing project was in its prime increment, with houses still being expanded initially and community being built among the people who were coexisting within the block. **The flaw in the design of the entire project is that it has been able to go beyond the intended level of incrementalism** that Aravena had ever intended.

Two decades since it first finished construction, the project looks similar to the sort of neighborhood that was its predecessor. The most costly result of this issue however is the reversal of the community ties that the architecture had originally facilitated. With ownership of the land that they live on formalized but the explicit boundaries of their expansions skirted, conflicts arose within the community as dwellings expanded into one another and into public spaces. Ironically, the social housing units themselves began to be sublet out to other poor Chileans, as the original builders grew dissatisfied with the living conditions within Quinta Monroy after the age of its prosperity, and moved elsewhere while profiting from being landlords themselves now.



Fig. 023 | Interior of a half house as built | Estudio Palma



Fig. 024 | Occupants' finished and expanded home | Tadeuz Jalocha

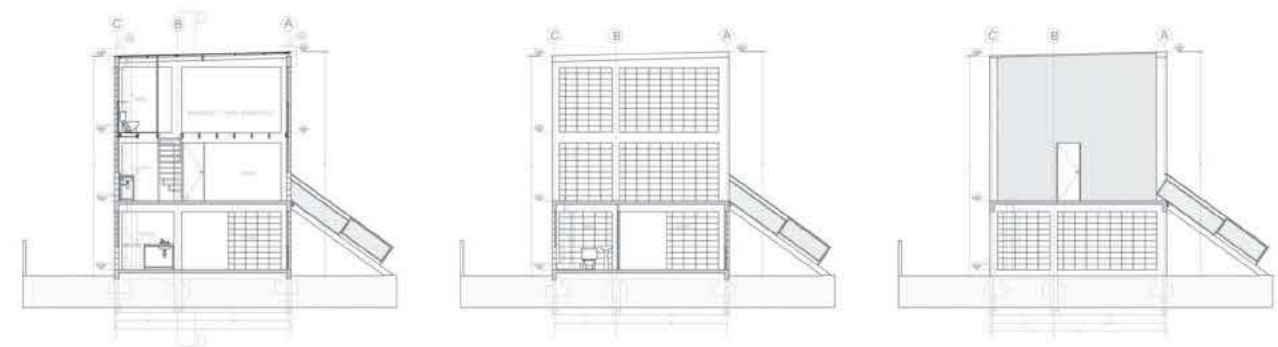
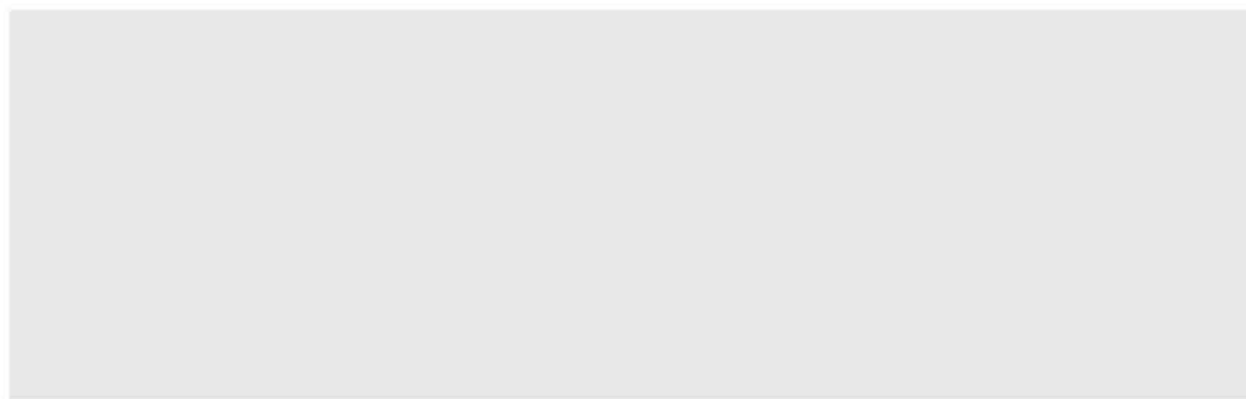


Fig. 025 | Cross sections of the half houses | ELEMENTAL

Fig. 026 | Overcrowded Courtyard | Estudio Palma



RELEVANCY

This project is a unique and radical example of what social housing might be - in this case the incrementality of living in a community was the emphasis of the design. While the climate and government agencies supporting this project may not match those in St. Louis where my site is, the ideas behind this design are directly applicable and could be used to help facilitate change in the States. The more recent problems that have arisen in the neighborhood serve lessons for planning a development of this sort.

REACTION

Incrementality is what ultimately created the problems in this project, though I think that with more controlled direction of the infill that happens as well as clearer directions, there could be a lot of potential to this sort of development for housing. I really like the architect's idea for creating agency in living conditions for the residents of the area. I recognize though that the success of any sort of incremental project is the ability for the residents to actually begin their expansions. In the case of Quinta Monroy that wasn't much of an issue, though if housing is meant to be for everyone then there inevitably will be those who are unable to expand and should have access to adequate housing regardless. The aesthetic qualities of the initial houses were cold in materiality and the provided amenities, but the scale was human and **the incremental aspect allowed the neighborhood to grow into one that was representative of its residents and more attractive and organic in appearance.** The organization of the buildings around courtyards was especially nice in that it originally created hubs for communities to grow, until they became encroached upon by unplanned for extensions to the buildings and they were filled with cars that had nowhere else to park. This sort of issue would be imperative to plan for in the United States, where car ownership is much higher along with the dependency on them.

Fig. 027 | Conflicted zone of ownership



WOHNPARC ALT-ERLAA

GLÜCK, HLAWENICZKA, REQUAT & REINTHALLER
VIENNA, AUSTRIA
1973

Wohnpark Alt-Erlaa, roughly translating to Park Residences at Alt-Erlaa, is **one of the most successful examples of a social housing block in the world**. Originally planned in the late 60s as a 4200 unit complex, the development was constructed beginning in 1973 and finished in 1986 with a final tally of 3,181 units varying in size but with an average floorplan of about 800 square feet. The towers that were built range from 23 to 27 floors, and are organized into three main blocks that house around 9,000 people. These blocks are organized around a large central park and several other smaller structures that make up the rest of the complex.

The design for the entire complex was guided by the principle of making **the most happiness for the most people** through the amenities that the architecture offered. The units are representative of stacked family homes, as 65% of them have three or more bedrooms and are comprised of over 35 different floorplans for different accommodations. Because the towers were shaped parabolically, the first twelve floors harbor deep balconies that receive ample sunlight, while the floors above them have smaller balconies but have better vistas over the Vienna metro that surrounds it. Additionally, the towers host fourteen separate swimming pools and seven saunas across the rooftops and in their basements. Throughout the towers and across the site, there are several tennis courts and a gymnasium, as well as 33 different leisure rooms, a church, two kindergartens and three schools, a daycare, two medical centers, and restaurants and retail centers.

The entire social housing complex at Alt-Erlaa essentially forms a miniature community within Vienna and the greater metro area around it, complete with nearly everything it would need to function on its own. This is made possible by ample funding by Austria's government, policies that support public ownership of shelter and favor renters in the market, and a general cultural attitude that doesn't emphasize the importance of homeownership so much in the way that the "American Dream" would.

With the financial and political support for the project as well as the ample amount of amenities on the site that residents can enjoy, vacancy rates have been close to zero for the entire duration of the towers' lifespan. Surveys done over their lifespan by residents of the towers have shown satisfaction levels far above average in comparison to resident satisfaction at all other housing complexes, both public and private.

Fig. 028 | Alt-Erlaa housing tower | Architekturzentrum Wien



Fig. 029 | Pool view over the site | Hertha Hurnaus via the Museum of Vancouver



Alt-Erlaa's design philosophy of maximized happiness for a maximized population is very literally maximized through the amenities it sports on site, and the way that it's organized to be governed. Because of the financial support that the government has continued to provide social housing in the state, upkeep and maintenance have more than kept up with the demands of the times, and much of the development has been modernized through renovations to keep it **contemporary and wholly viable**. Tenants within the complex have a **high level of control** over what goes on and how things operate within the development, due to the presence of a *mieterbeirat*, or tenant advisory board, that represents and democratically involves the residents of the complex.



Since 1947, the Austrian Social Democratic Party has pursued rigorous social housing policies that favor putting tax revenue towards creating publicly owned housing. Just in 2018, Vienna was allocated €450 million to spend on public housing. The tax money used for these expenses is sourced from income taxes and taxes on corporations, as well as supported by contributions to housing that are paid directly by employees. In the mid 1990's, legislation was passed that allowed for these social housing units to be bought privately, but local governments have resisted this and only some 8000 public units have been privatized since its introduction while construction of new public units has massively outpaced their purchasing. Policies have also been ratified that favor the rights of renters heavily in the state, helping to dissuade privatization and profit making from housing generally. All renters in social units, as well as roughly two-thirds of all renters in private units as well, have indefinite lease agreements and rent rates that generally cost less than a third of renters annual incomes. At Alt-Erlaa, these combined factors of favorable renter's policy and well funded and maintained amenities make for a 93% satisfaction rating as of its latest resident surveys, and as long as a five year wait for an apartment opening for any new residents. The complex is perhaps the best manifestation of the combining of Austria's governmental policy and the highest level of humanities focused design.



Fig. 030 | A sauna in the basement | Alt-Erlaa Tenant Advisory Board



Fig. 031 | One of the kindergartens | AEAG



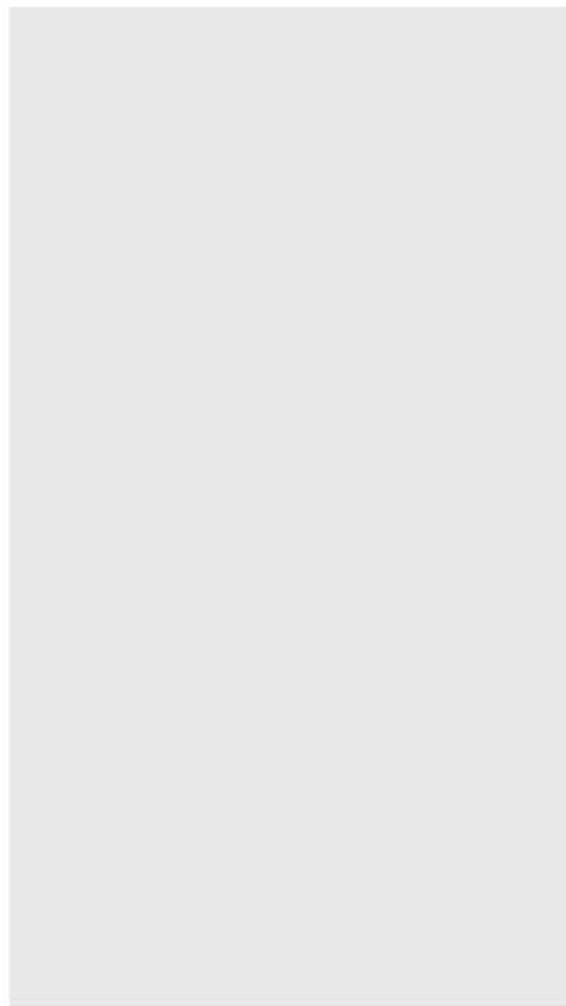
Fig. 032 | Shops and a plaza | AEAG



Fig. 033 | Courts in the gymnasium | AEAG

RELEVANCY

While this project shows ample amenities and examples of program pieces that cater to designing good communities, the real value in examining Alt-Erlaa is in the operation and continued upkeep of the project. The role of the architect is not that of a politician of course, but we should be at the forefront of leading a humanitarian front that benefits the citizens of our communities, and that inevitably is a process that involves politics. The designs we make can speak the language of the policies they serve, and the policies we set can be revealed through design.



REACTION

The complete package that this project's program offers is incredibly humane and in the spirit of the sort of design I'd like to deliver. While it serves well to examine for policy to replicate or improve, it's program also serves practically as **a catalog for typologies that work hand in hand with housing to create healthy and happy communities.** The design language of the project is fascinating in how it contrasts ecology and brutalism, and the two support each other well and provide an aesthetic balance for the entire site. The extreme lushness of the balconies and the park that the site is anchored around might feel wild and foreboding, if it weren't for the huge sweeping towers that assert man's dominance over nature, and allows the growth to flourish comparatively to how it may if it were only framed on small, standard balconies and structures that constantly retained their human scale. This style of design at human scale provides what feels like personal **miniature forests** that each resident can rule and observe the rest of the world from. The upper parts of the building that extend vertically without lushness do however appear more imposing and less hospitable than the standard single family home or the lush lofts closer to the ground. The scale of the project makes those floors necessary, but perhaps in the slightly smaller program in St. Louis.



Fig. 034 | Balconies and terraces | Emma Braun



miniature forests

BAIZIWAN

MA YANSONG, MAD
BEIJING, CHINA
2021

Baiziwan is a contemporary social housing complex that has been installed into 6 city blocks just outside of Beijing's central business district. The project consists of twelve Y-shaped towers situated across the blocks and linked together via a raised running and walking platform that functionally works as a park linking all of the towers. The towers provide space for up to 4,000 households, and after a year there are already over 3,000 families living in them.

Lead architect Ma Yansong's research in social housing across the world and throughout history culminated in this residential project, which aims to link the neighborhood to the rest of the dense urban environment. The 6 blocks that the project was designed on are anchored to a central avenue that the towers utilize for connections to shops, restaurants, schools, pharmacies, and an elderly care facility. While the street level is open and accessible to the general urban population, the second level where the walkways, parks, gardens, and a gym are only accessible to the 10,000 or so residents of the development.

The design of the project is intended to **break up the homogeneity of other standard housing models that are seen in China and around the world**, by using organic forms and exploring the boundaries of prefabricated construction without making monotonous shapes. In the last several decades, the rapid rate of construction has led to many parts of the country to build similar or identical appearing "cookie cutter" highrises that dulled the aesthetic built environment.

To achieve their goal of creating unique looking structures that facilitate healthy, happy and diverse living, the Y-shaped towers have cascading floors that terrace upwards like the sides of mountains, making community spaces in the valleys between them. These terraces and spaces between them are covered in ample amounts of greenery, accounting for 47% of the one million square feet of space over the site. These spaces speak to **humanity, dignity, and social equity**, and have proven so far to be a stellar example of what public housing in China can move towards.

Fig. 036 | Apartments rising over public courts | CreatAR Images





Ma Yansong began researching social housing in 2014, and saw an opportunity to both enrich the built environment of part of Beijing's urban core as well as interweave a neighborhood with the urban structure of a city. Through his lectures and research at Tsinghua University, Yansong addressed the "sociality of social housing", and strived to develop a product that is community based and benefitting. The project is lifting the standard living conditions for low-income families in the area as well as the standards for the built environment itself.

Two of the twelve structures on the site are built to Passive House standards, and every tenant room in the project gets ample sunlight each day due to the unique orientation of spaces. The 4,000 units within the project are comprised of six different floor plans, three of which are meant to have extremely low-energy consumption.

Given the financial restrictions of public housing in China, the units had to be designed to be compact, and range only from about 450 square foot layouts to 650 square feet. To help keep costs low, precast construction was used to expedite the time spent during construction and minimize waste. This decision meant however that the form of the building had limitations, as every part ultimately had to be modular. Floorplans on the inside however benefitted interestingly from this sort of modularity; interior partitions that divide the floorplans are adjustable to provide tenants their own flexibility in how the space they occupy is arranged. An additional benefit to the prefabrication of parts for the building was the higher quality control available through production that happened within a controlled, systematized environment.

The final product of MAD's first dip into social housing as a typology will take time before its merits are fully reaped, but early signs show results similar to other large scale successful housing projects such as the *gemeindebau* of Austria. It is one of the largest contemporary examples of a social housing project worldwide in the last couple decades, and will serve as a foundation for more housing models in China as their housing market slows down and begins to shift away from privatization again.

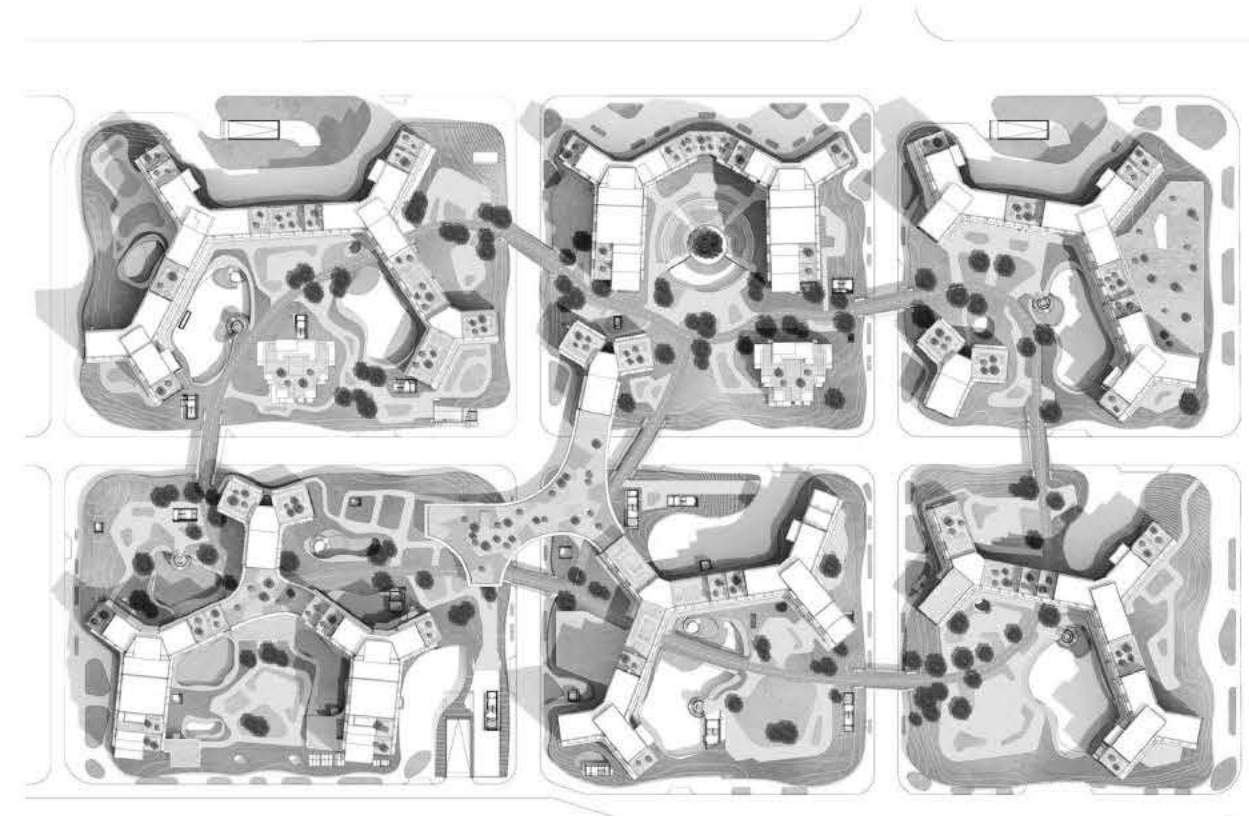


Fig. 038 | Baiziwan site plan | MAD



Fig. 039
Pedestrians in the street
Yumeng Zhu



Fig. 040
Raised walkway
CreatAR Images



Fig. 041
Second level plaza
CreatAR Images



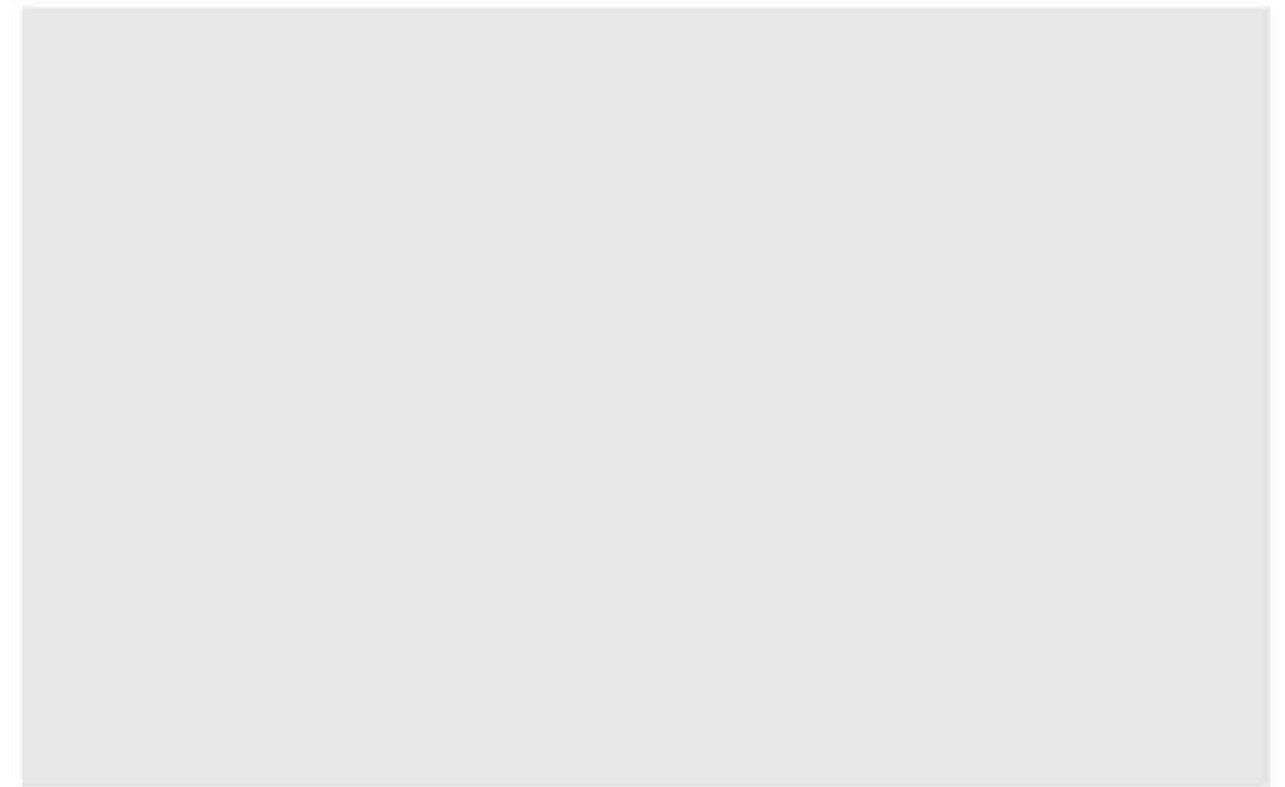
Fig. 042 | Streets, paths, and skyways | CreateAR Images

RELEVANCY

Baiziwan is a great example of contemporary efforts within the public housing field. The scale of this project is quite similar to that of my own, and could serve as a great guide along with other case studies for selecting typologies to support the social housing. Additionally, this project interfaces with travel infrastructure in a unique way that may be applicable in a street and car dominated area like St. Louis. While policy for housing is different in China this - being a contemporary example - may also serve as a solid example for how to organize and govern housing in the modern twenty-first century.

REACTION

This project encapsulates many of the ideals that I'd like to express with my own design. It achieves affordability and general feasibility for the government while also providing a huge amount of contemporary amenities to its residents. Additionally, I think that the way that **the connection between the neighborhood and the greater urban fabric is a fantastic design initiative, and one that is desperately needed here in the States.** I think that injecting the streetscape with interactable and attractive retail, restaurant, and leisure outlets is a great way to connect a built environment to people, and centering the social housing complex as a whole around a spot where this occurs inevitably links the greater public then to the residents of the development. This is the sort of architectural tying together of things that builds community, and facilitates our most optimal living settings.





SITE ANALYSIS

Old Site of Pruitt-Igoe
Carr Square
St. Louis, MO 63106
38°38'35.3"N 90°12'37.2"W

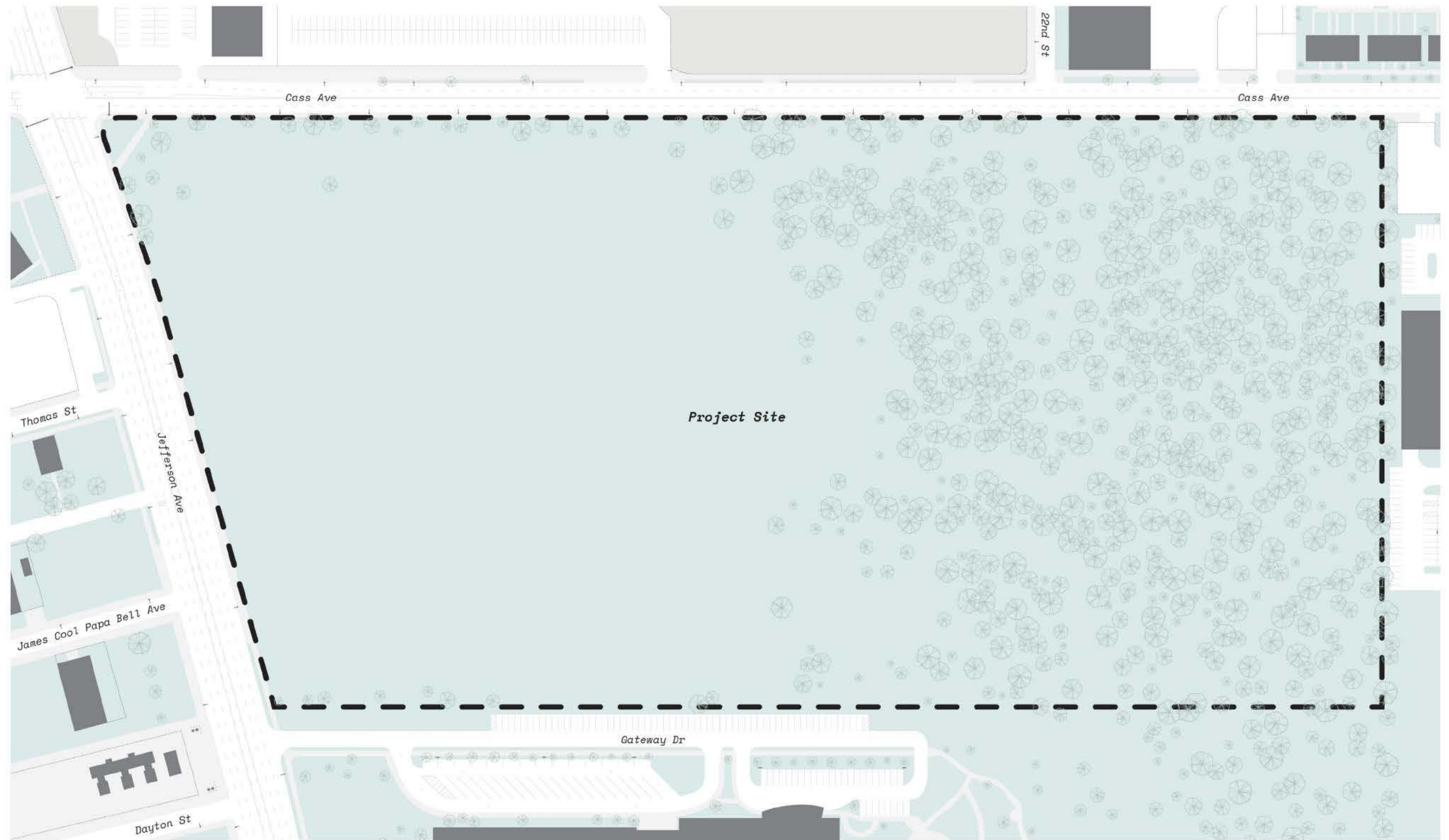


Fig. 044 | Existing site map



SITE TOPOGRAPHY

Site Size:..... 35.2 acres/1,536,000 SF
Peak height on site:..... 529' above sea level
Height Δ on site:..... 26'

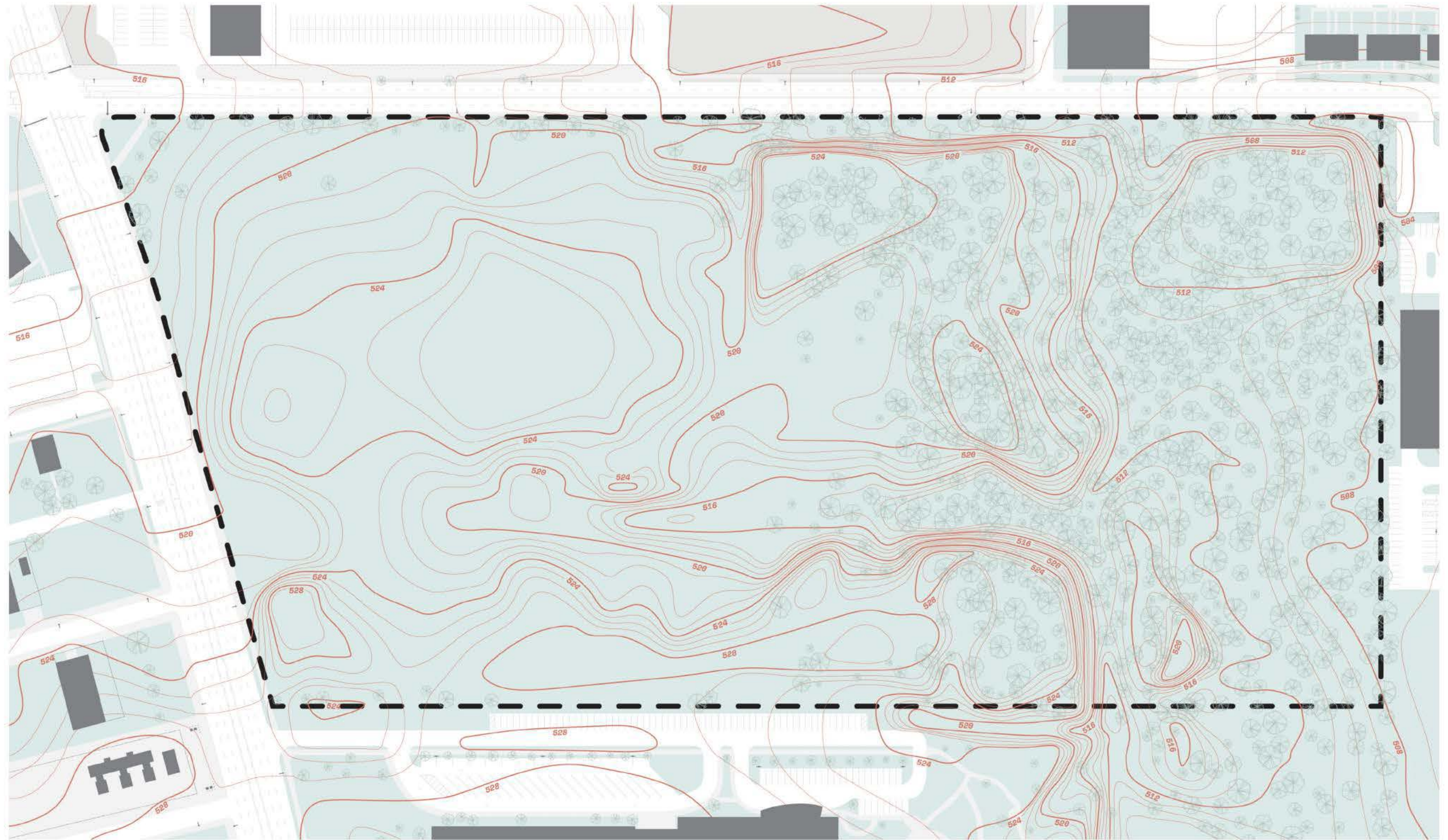


Fig. 045 | Site topography

SITE GEOLOGY

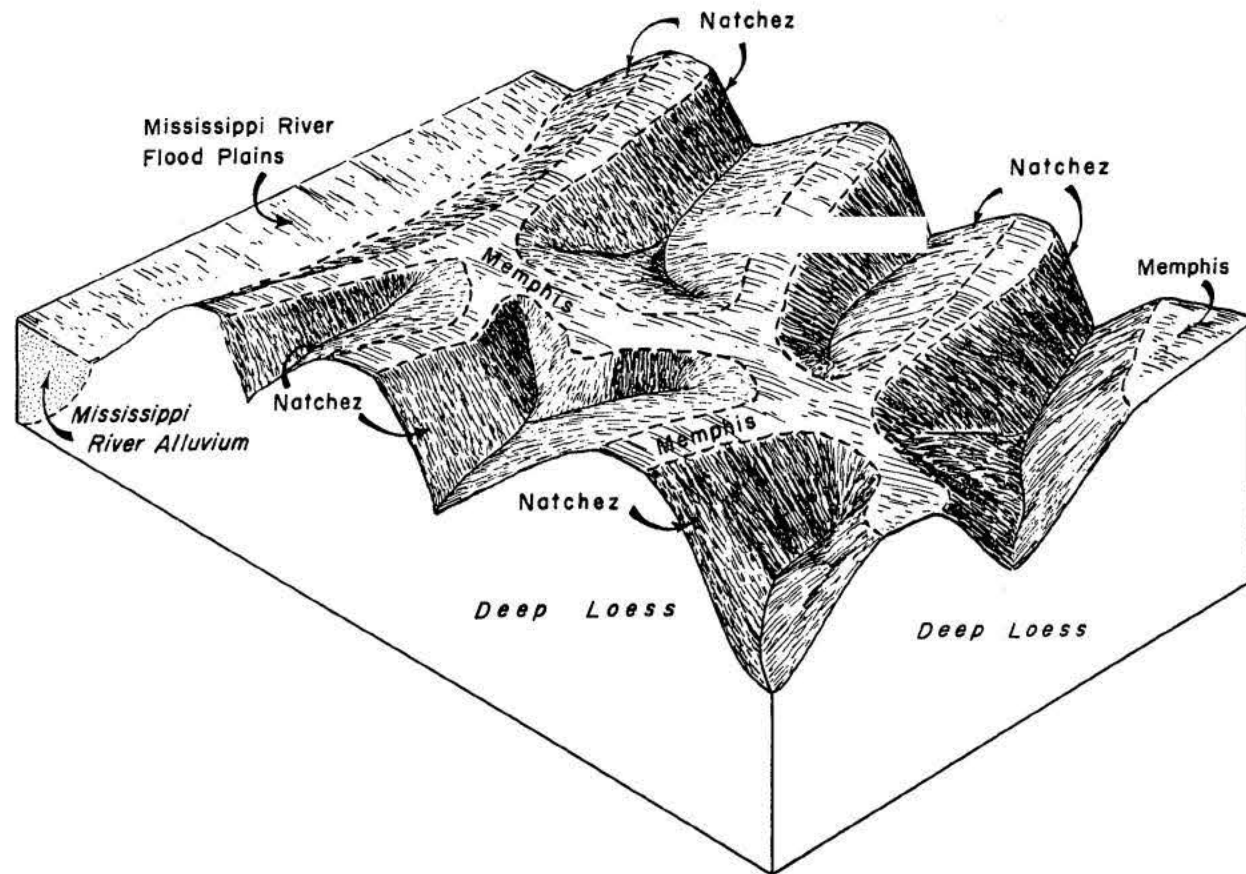
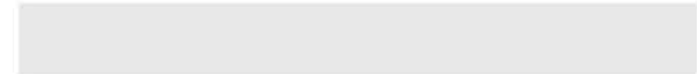


Fig. 046 | Memphis soil formations | CA Soil Resource Lab

SOIL COMPOSITION

The soil deposits on the site and around most of the St. Louis area are composed of sediments carried downstream by the Mississippi River. The surface layer of soil is a silty loam that overlays a semi-permeable layer of silty clay. This sort of soil can rest on slopes ranging from 0% - 45%, and is typically classified as **Memphis Soil**. This sort of soil offers decent runoff and is moderately permeable, as it is well drained.

FOUNDATION LAYER

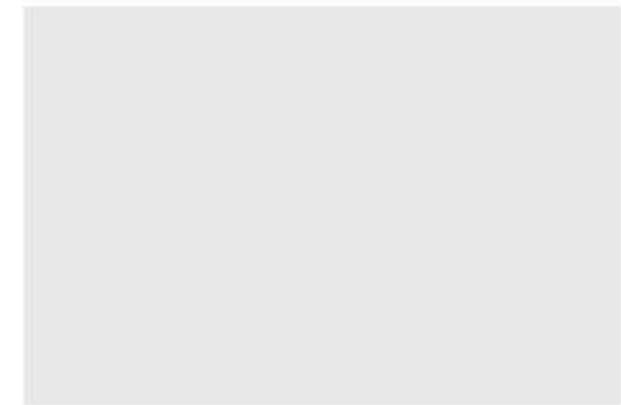
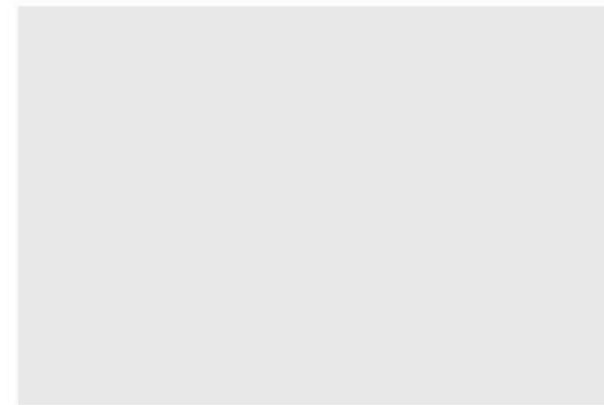
The bed rock beneath St. Louis's soil is composed of sedimentary limestone with pockets of chert deposits. The limestone beneath the soil is named **St. Louis limestone**, as it is notable for an exposure of it in the city and it's wide coverage of the midwest region's geological makeup, reaching outwards all the way below central Tennessee and parts of western Kentucky. The bedrock layer rests between 5 and 10 meters beneath the surface soil across the majority of the site.



Fig. 047
St. Louis limestone
James St. John via Flickr



Fig. 048
Memphis soil
EcoGEM



NATIVE VEGETATION

Fig. 049 | Native vegetation



BALD CYPRESS

A deciduous conifer native to the south eastern regions of the United States. It's notable for its hardiness in a variety of different conditions, especially wetlands.



BLACK GUM

Medium sized deciduous tree native to eastern parts of the United States. In the autumn, it's leaves are known to turn a bright shade of scarlet red before dropping.



BUTTON BUSH

Small shrubs or trees native to northern and eastern parts of North America. Its stems produce round white flowers that produce seeds often eaten by water fowl.



EASTERN RED CEDAR

A juniper tree native to eastern North America. It is the most widely distributed conifer in the eastern states, as it is incredibly resistant to drought, heat, and cold.



FALSE INDIGO

An upright perennial that bears long spikes of pea shaped flowers for several weeks each spring, that attract butterflies, bees, & hummingbirds.



LITTLE BLUESTEM GRASS

An ornamental grass native to the eastern parts of North America. It grows in tufts with slender blue-green blades of grass reaching 18 to 24 inches tall.



MISSOURI CONEFLOWER

A perennial native to the Ozark region of Missouri, often growing in limestone glades. It often will spread to grow in large colonies when in the wild.



NINEBARK

A shrub native to North America and northeastern parts of Asia. It's leaves bear five-petaled flowers in bunches that attract pollinators in the spring.

POST OAK

A North American white oak species that has slow but sturdy growth over time up to 35 to 50 feet. It is resistant to fire, rot, and drought conditions.



PURPLE PRAIRIE CLOVER

A flowering plant native to central North America. It grows well in loam and clay, and is quite common in the prairies of the Great Plains.



ROYAL CATCHFLY

A perennial native to central North America. It grows upwards to heights of up to five feet from a fleshy taproot, and bears bright red flowers in the spring.



SASSAFRAS

A perennial native to wetlands in north eastern parts of the United States. Its leaves often lie on the ground while tall stems rise up and bear violet-blue flowers.



SOUTHERN BLUE FLAG

An upright perennial that bears long spikes of pea shaped flowers for several weeks each spring, that attract butterflies, bees, & hummingbirds.



TUSSOCK SEDGE

A tufted wetland sedge that grows up to 24 inches tall in wetlands and marshes. When its leaves die, they build up around the plant and turn it into a "tussock".



VIRGINIA SWEETSPIRE

A small shrub native to southeastern parts of North America, that bears small flowers along long stems. It grows well in low woods or along the edges of wetlands.



WINTERBERRY HOLLY

A species of holly native to eastern North America which loses its leaves each autumn while bearing bright red berries that attract birds.



CLIMATE DATA

St. Louis is relatively centered in the country, sitting at a cross section between warm fronts that are blown north from the Gulf of Mexico, and cooler fronts that originate in Canada and move south. Because of this, it experiences the four seasons to their full capacity. In the summers, temperatures typically exceed 90 degrees fahrenheit anywhere from 35 to 40 days out of the season, and most years as many as five of those days may even exceed 100 degrees. Come winter, the weather is cold and dips into freezing temperatures usually no more than 25 days each year. Extreme temperatures in the winter are rarely sustained, and only experienced two or three days in an average year. Annual precipitation in the region is just below 34 inches. The cold months are the driest, while the spring will usually bring up to 10.5 inches of rainfall, occurring over the course of an average 40 to 50 thunderstorms that hit the area each year. The site sits well within the region of tornadoes, and St. Louis has a history of damage and loss as a result of them.

AVERAGE MONTHLY SUNSHINE & DAYLIGHT HOURS

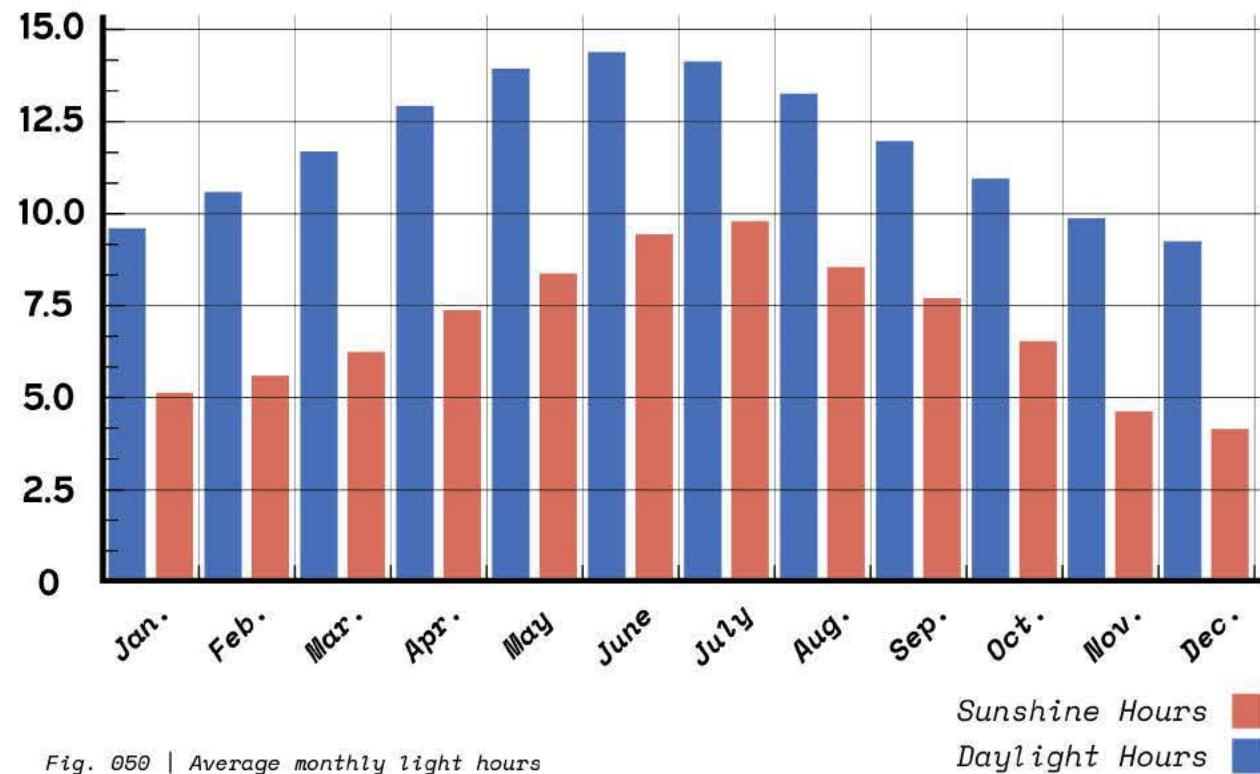
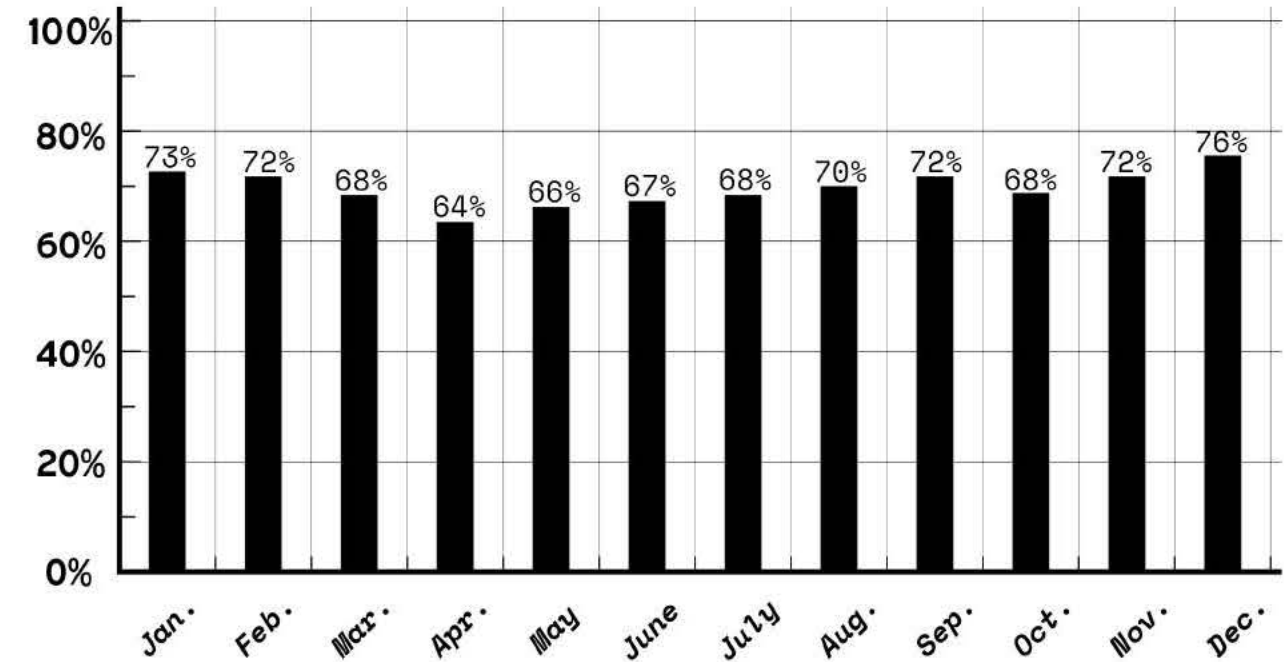


Fig. 050 | Average monthly light hours

Fig. 051 | Average monthly relative humidity

AVERAGE MONTHLY RELATIVE HUMIDITY



AVERAGE MONTHLY TEMP. (DEGREES FAHRENHEIT)

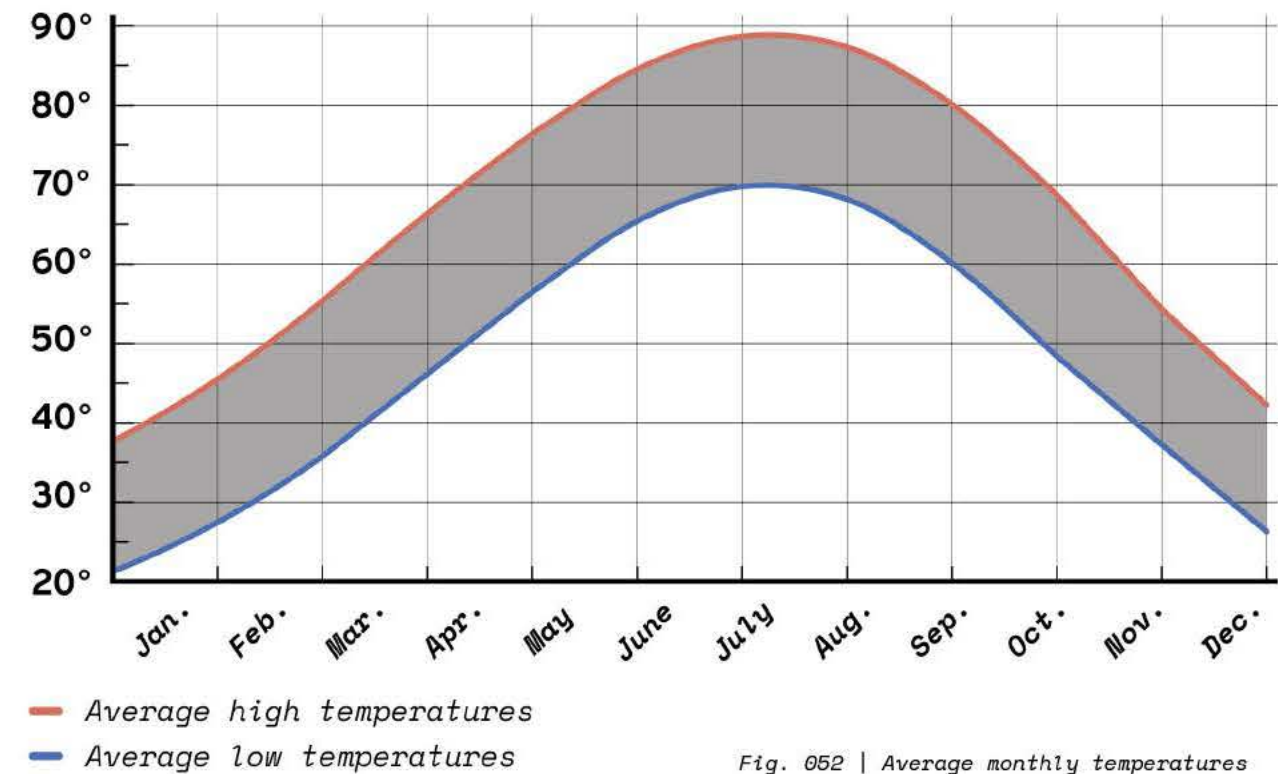
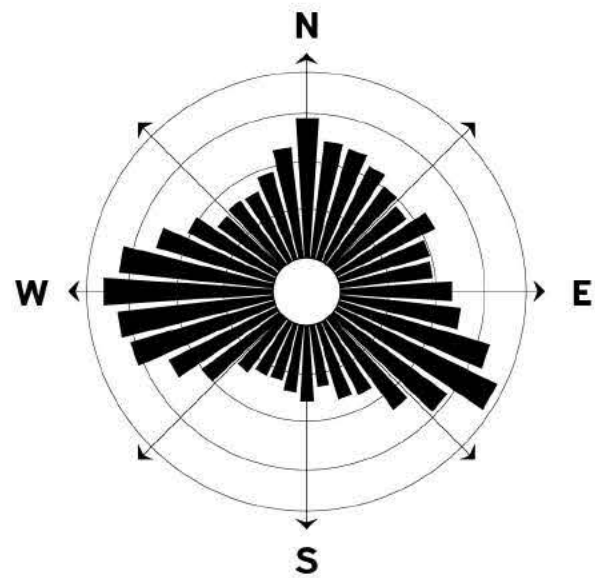


Fig. 052 | Average monthly temperatures

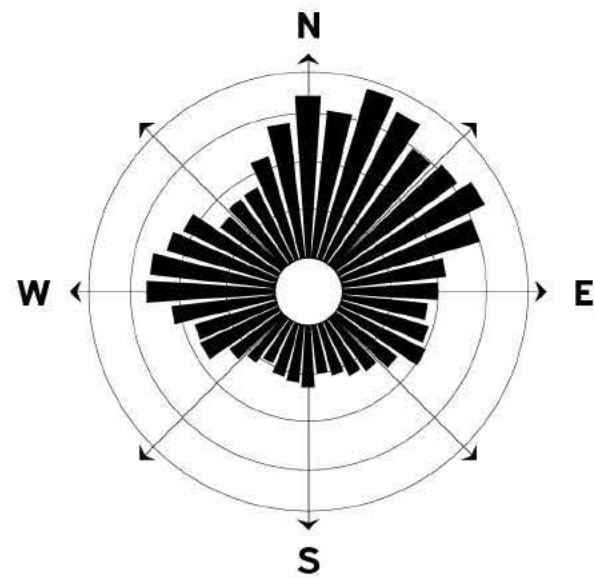
Fig. 053 | Average seasonal winds

SEASONAL WIND PATTERNS



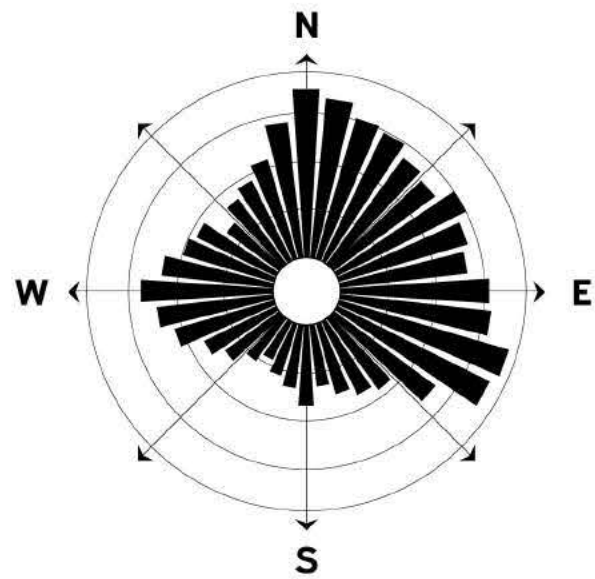
SPRING

Average Wind Speed:..... **9.4 MPH**
 % Calm:..... **11.4%**



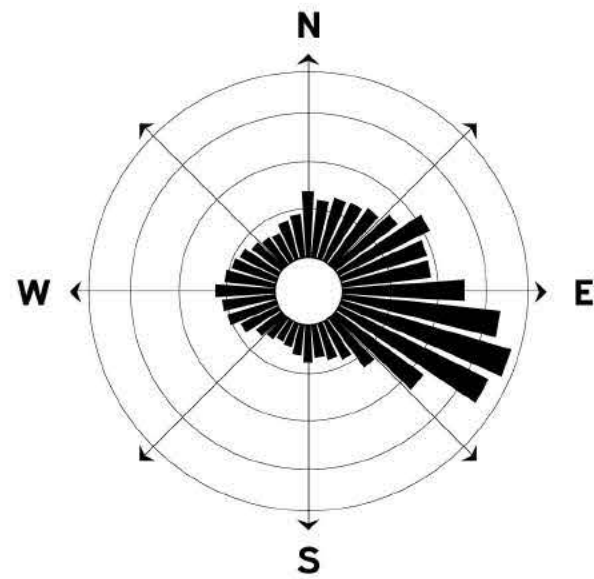
SUMMER

Average Wind Speed:..... **6.9 MPH**
 % Calm:..... **17.3%**



AUTUMN

Average Wind Speed:..... **9.3 MPH**
 % Calm:..... **10.5%**

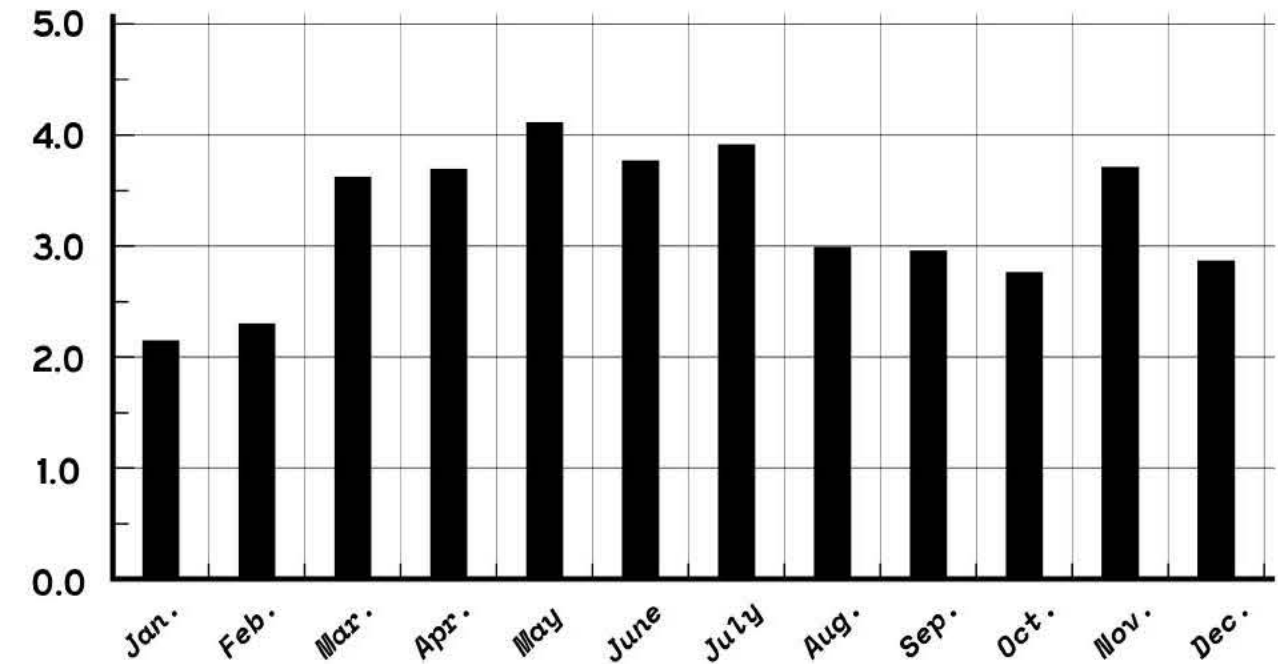


WINTER

Average Wind Speed:..... **10.3 MPH**
 % Calm:..... **7.8%**

Fig. 054 | Average monthly rainfall

AVERAGE MONTHLY RAINFALL (IN INCHES)



AVERAGE MONTHLY SNOWFALL (IN INCHES)

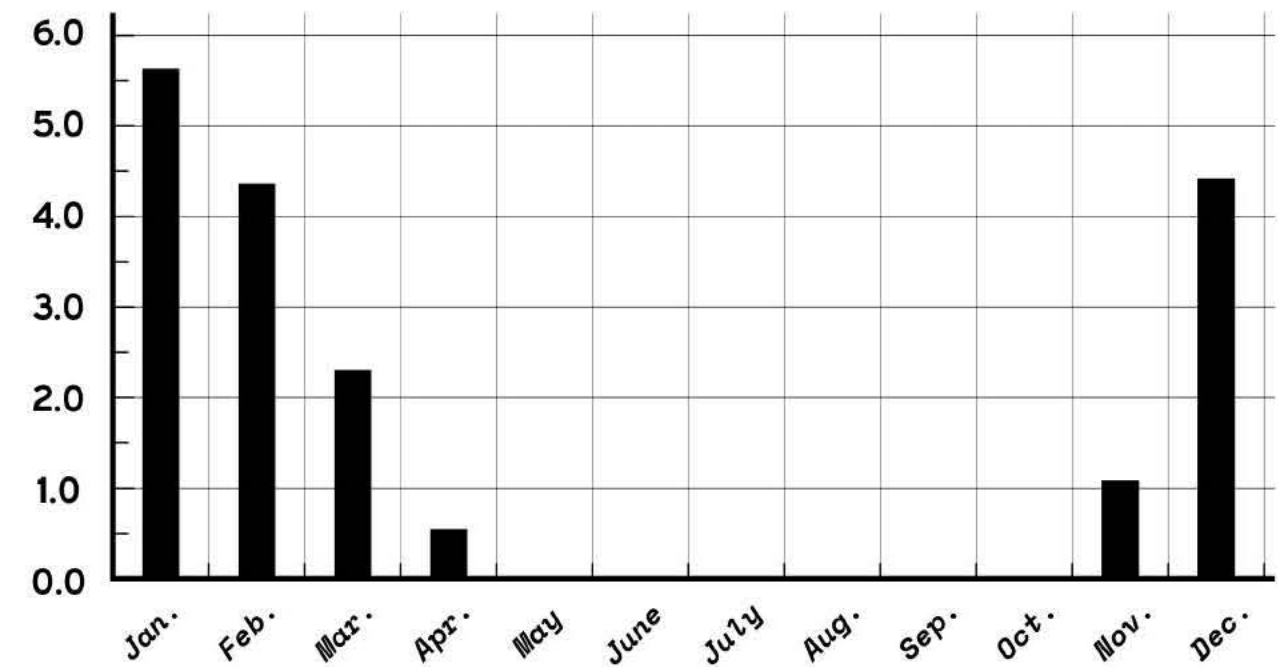


Fig. 055 | Average monthly snowfall

DISASTER CONSIDERATIONS

SEVERE THUNDERSTORMS

Missouri is prone to experiencing severe thunderstorms in the late spring and early summer. When these storms occur, they can bring hail larger than three quarters of an inch in diameter, and winds reaching over 60 milers per hour or even developing into tornadoes.

FLOODING

St. Louis has systems in place to prevent and redirect floodwaters from storms, though it is possible for flash flooding to occur and cause significant damage both immediately as well as in the long run as structures experience internal water damage.

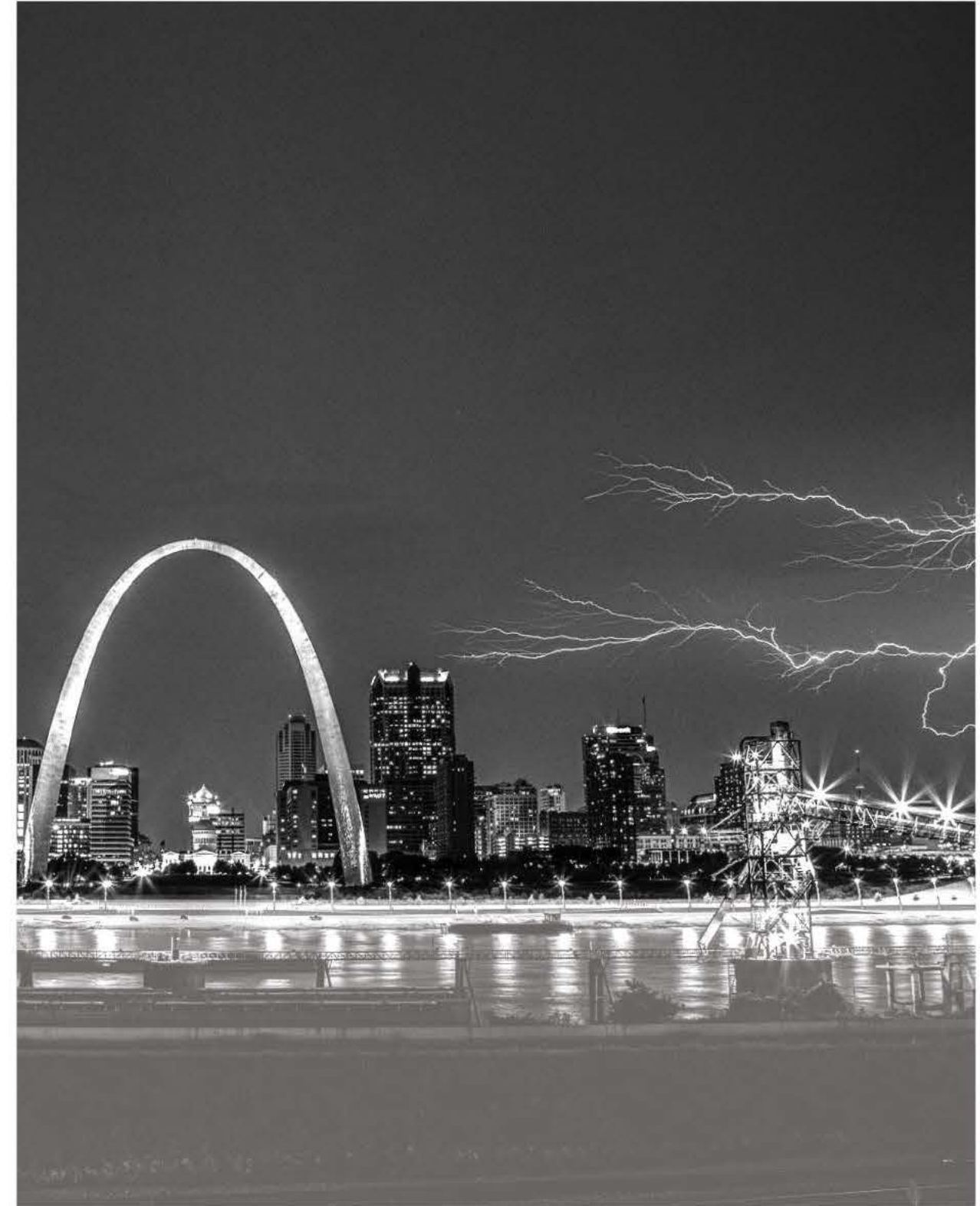
TORNADOES

Being in the central United States, St. Louis is right in the middle of tornado country. These columns of wind can travel up to 70 miles per hour and cover up to a square mile at once, while their winds can reach swirling speeds of up to 250 miles per hour in their most violent cases.

EARTHQUAKES

The New Madrid Seismic Zone is an area that experiences earthquakes that cause damage to Missouri and a number of other central states. Most quakes in the Missouri region of the zone are dismissable, but every few years on average there are quakes strong enough to crack walls.

Fig. 056 | Lightning strikes St. Louis | u/mosttope via Reddit



SITE HISTORY

BEFORE PRUITT-IGOE

Jefferson & Cass Ave have flanked the borders of the site since long before Pruitt-Igoe's time. In 1900, St. Louis had a population of 500,000, but by mid century that had ballooned to 850,000 as a result of the Great Migration from the south. Millions of black Americans migrated to northern industrial cities over the course of the century following their emancipation, where they often would live in communities together that became underserved and fell into "slums". Many urban environments became congested as these cities didn't have the proper means of accomodating the massive amount of migrants arriving to them, and the site of this project was home to an area deemed to be one of these sorts of slums. **Thousands of these migrants from the south were living in rowhouses and working in small businesses across the site.** The 35 and some acres were split into 30 city blocks by a grid 15 degrees off-axis. During the development of the country following World War II, the Housing Act of 1949 was signed into legislation, which authorized the destruction and rebuilding of areas deemed slums by city officials. The St. Louis housing authority recognized the site as congested and a stain on the city's image, and began its destruction and redevelopment in 1951 into what would be Pruit-Igoe.

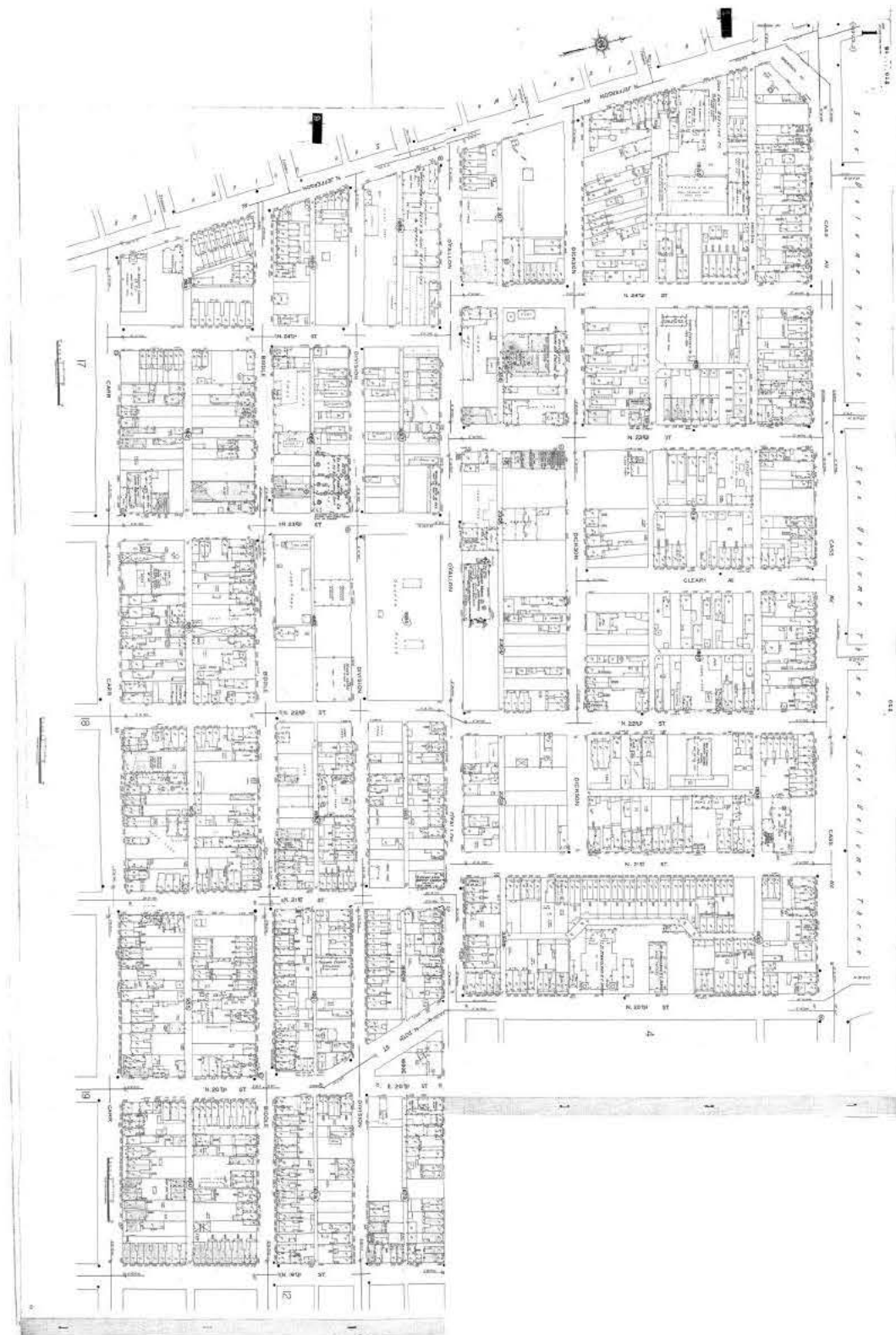


Fig. 057 | Site map in 1938 | Sanborn Fire Insurance Maps

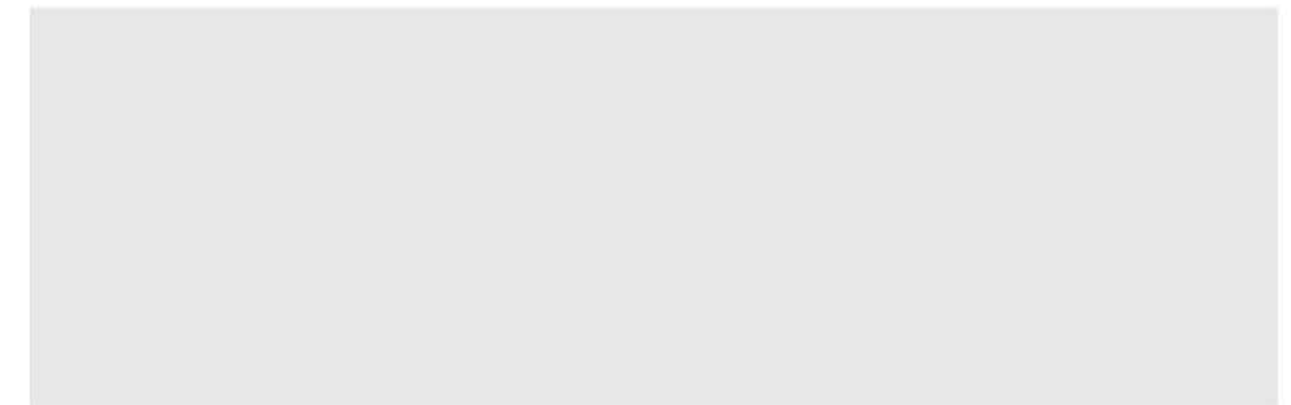
THE DELMAR DIVIDE

St. Louis was one of the first cities in the United States to push for their own local zoning laws, beginning in the early 1900's with the explicit purpose of preventing what local realtors at the time called a "negro invasion". During the Jim Crow era, the City of St. Louis passed an ordinance that stated **if 75% of a neighborhood were of a certain race, then no one from a different race would be allowed to move into that neighborhood.** This law was struck down in court legislation by the NAACP, but as a response the city simply enforced **new laws that prohibited anyone not of the caucasian race from buying homes in certain neighborhoods** until that was also deemed unconstitutional in 1948 by the Supreme Court.

The result of these legislative acts in the city was a clear segregating of people based on race and socioeconomic class that has persisted since it's genesis. Delmar Boulevard is a clear border of these areas that runs east and west several blocks south of the site. The early 20th century saw black migrants concentrated into neighborhoods north of this street, most commonly into an area referred to as "The Ville", while more affluent white families settled into neighborhoods to the south. To further reinforce this divide even following the dissolution of the city's segregation laws, an **ordinance was passed in 1954 that redeveloped a primarily black neighborhood called Mill Creek Valley south of Delmar.** Most of these residents were displaced to The Ville, or new public housing projects that were being built north of Delmar.

Today, the effects of the Delmar Divide are still clearly apparent. According the U.S. Census, the population of the neighborhood directly north of Delmar is 99% black, has a median individual annual income of \$18,000, and only 10% of these residents possess Bachelor's degrees or higher. Conversely, the population south of Delmar Boulevard is 73% white, has median individual annual incomes of \$50,000, and 70% of these residents possess Bachelor's degrees or higher educational degrees. A study done by the Manhattan Institute examined socioeconomic inequalities between races in cities across America in the mid 2010's, and found **St. Louis to be the 5th worst metro in the United States for social equity among different races.**

The **Delmar Divide becomes visually apparent** when a map of St. Louis is coded to display income by areas. Annual household incomes on the north side of the city are significantly lower on average than those of the south side, and the **lowest median incomes are in fact reported from the zip code which the site of this project is in.**



POPULATION & MEDIAN INCOMES (IN THOUSANDS) BY ZIP CODE



Fig. 058 | Population and median incomes by zip code

POPULATION OF BLACK AMERICANS

LEGEND

- < 2,717
- < 1,364
- < 12
- City/Metro limits
- Delmar Boulevard

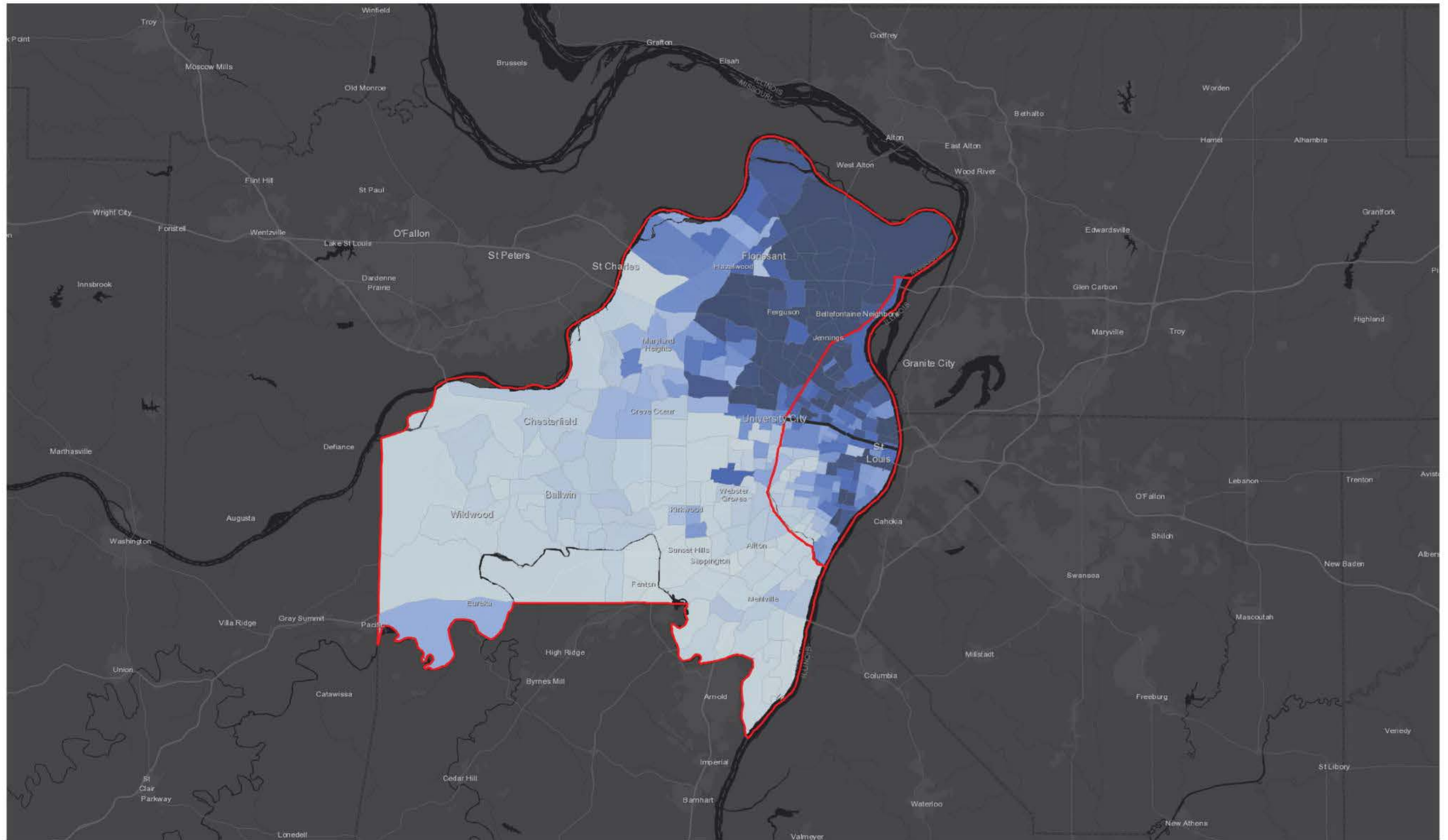


Fig. 059 | Population of black Americans | via arcGIS



MEDIAN ANNUAL INCOME

LEGEND

- █ < 88,500
- █ < 58,800
- █ < 29,100
- City/Metro limits
- Delmar Boulevard

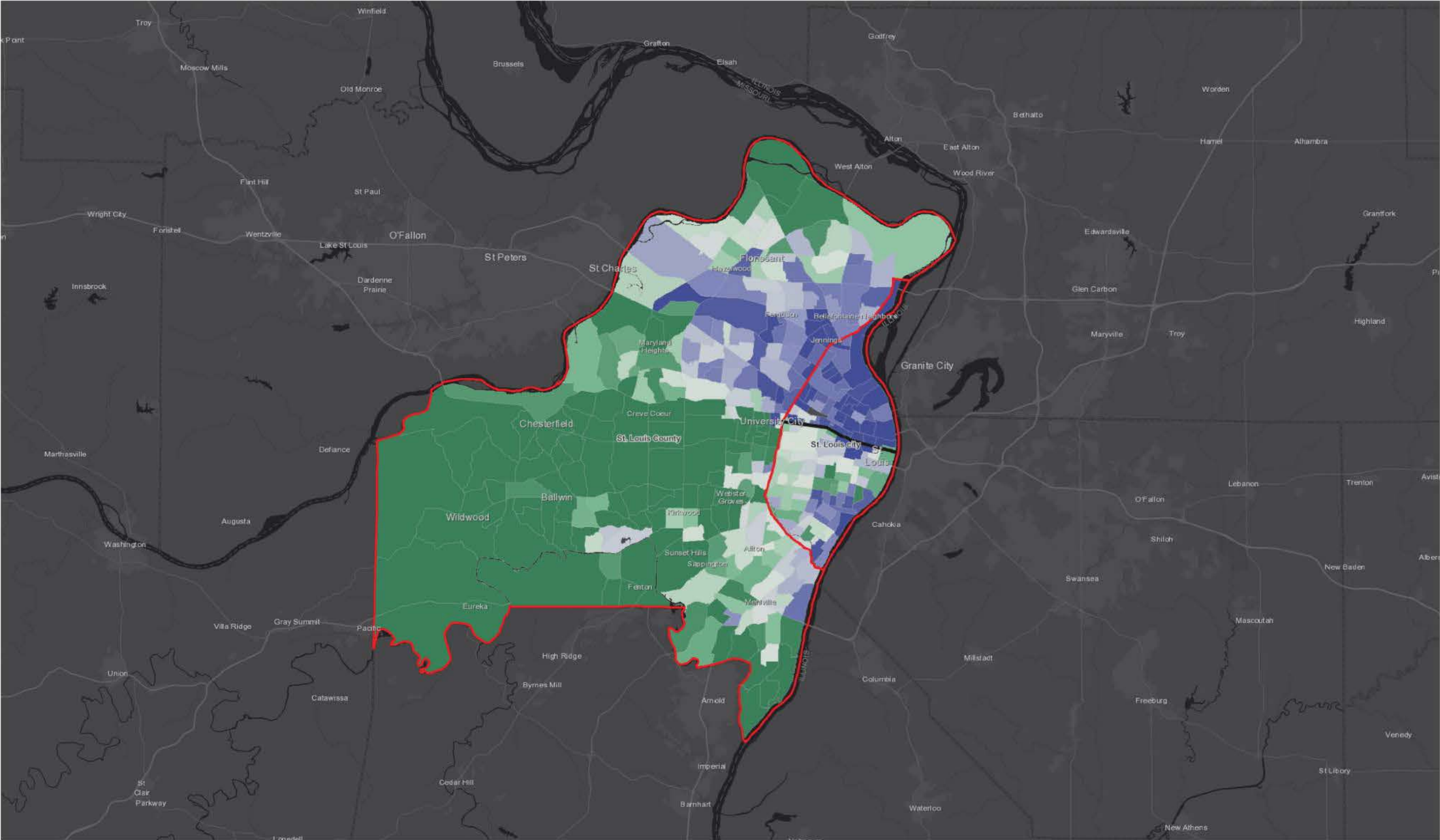


Fig. 060 | Median annual income | via arcGIS



AVERAGE LEVEL OF EDUCATION

LEGEND

- Less than 9th Grade
- 9th-12th Grade, No Diploma
- High School Graduate
- Some College, No Degree
- Associates Degree
- Bachelors Degree
- Graduate or Professional Degree

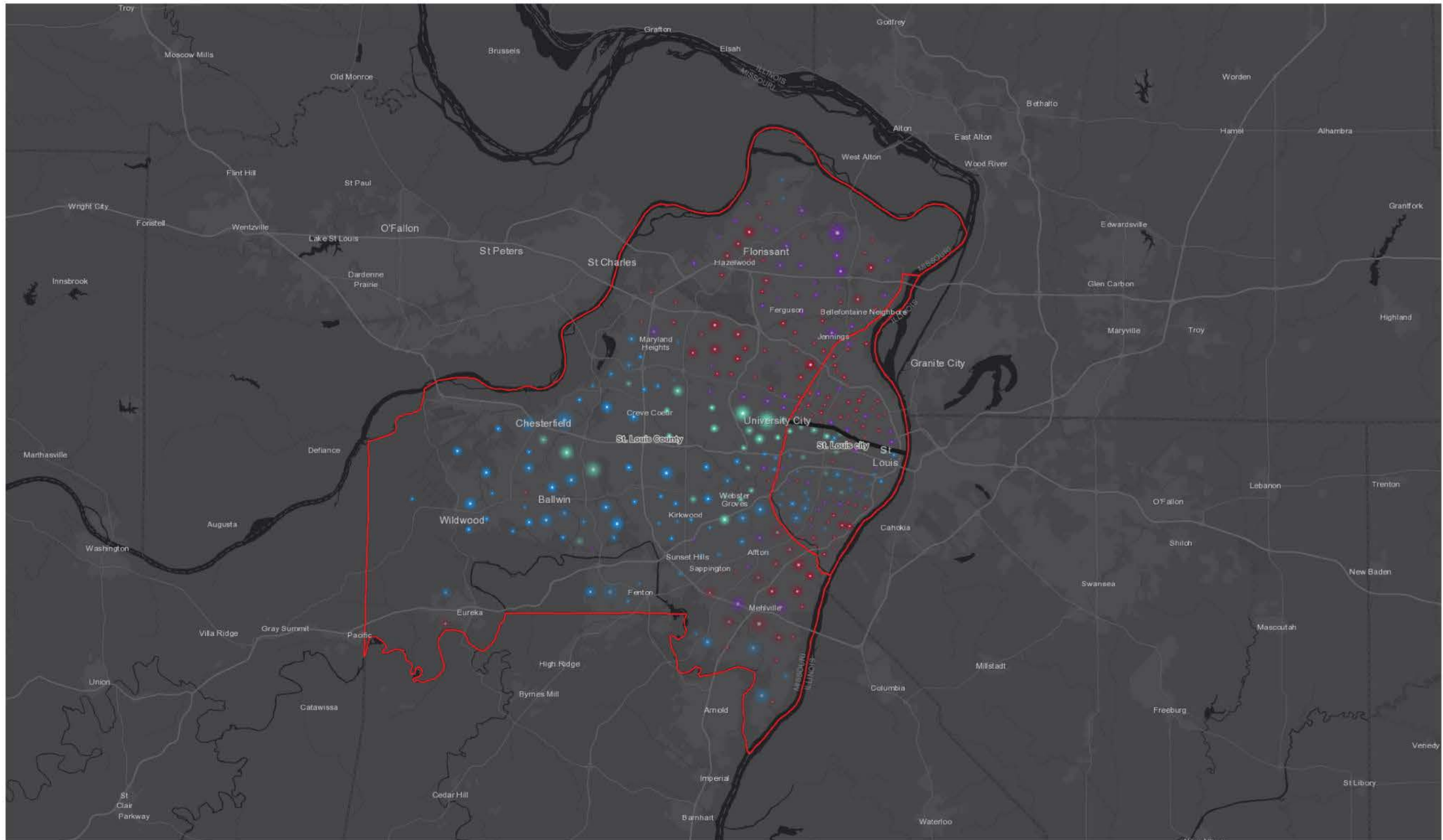


Fig. 061 | Average level of education | via arcGIS



ST. LOUIS DEMOGRAPHICS

While the city was once the great Gateway to the West - distinguished by its iconic archway and beautiful riverfront, and full of people and trade jobs - it has since dwindled into a pale shade of its past self. In the midst of the 20th century, the Great Migration saw hundreds of thousands of Americans flock to St. Louis. The city peaked at a population of 856,796 people in the 1950 census, but began to dramatically diminish in the 60's as suburbanization in the county drew residents out, while locking St. Louis's city limits up against the Mississippi River, preventing any geographic expansion of the city. Coupled with flight to the suburbs, there was a major shift in the industrial jobs market that left the city without thousands of jobs it once had to offer (For the first part of the century, the city held over 10% of all auto manufacturing jobs in the nation). Today, the city has dwindled to just under 300,000 residents (about 10% of the metro area's total population), and continues to diminish slowly. It still attracts immigrants, though now primarily those from Mexico, Vietnam, as well as the largest community of Bosnians outside of their native country.

POPULATION OVER TIME (IN THOUSANDS)

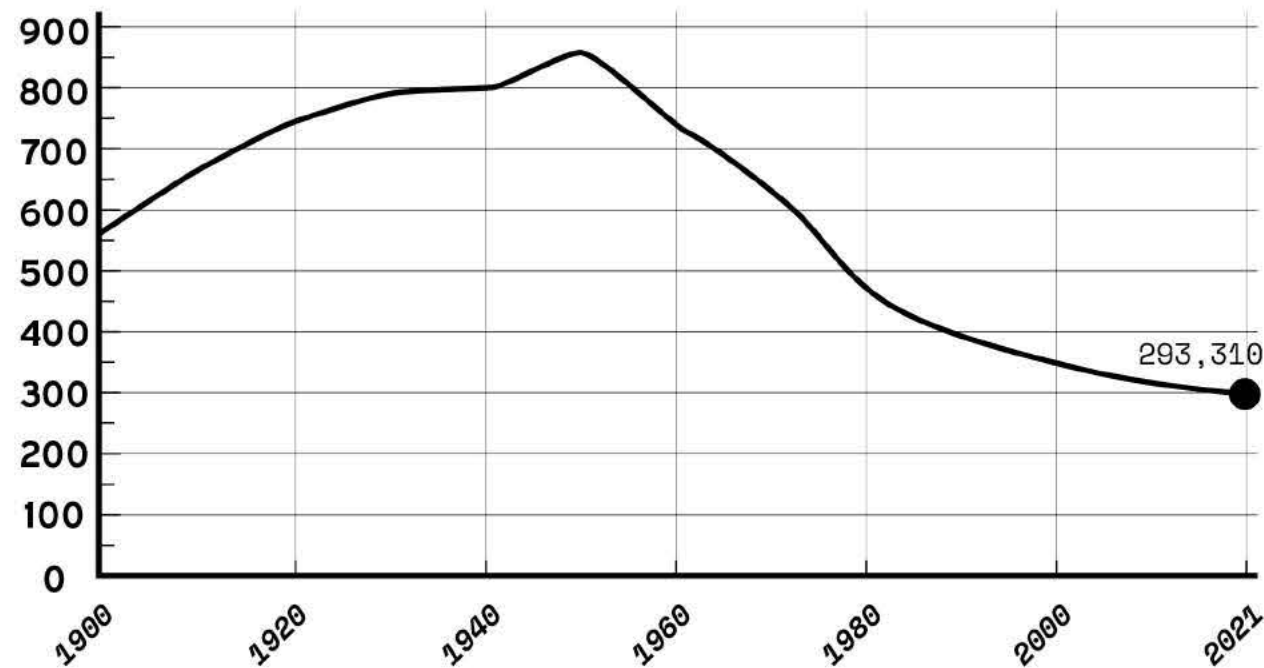
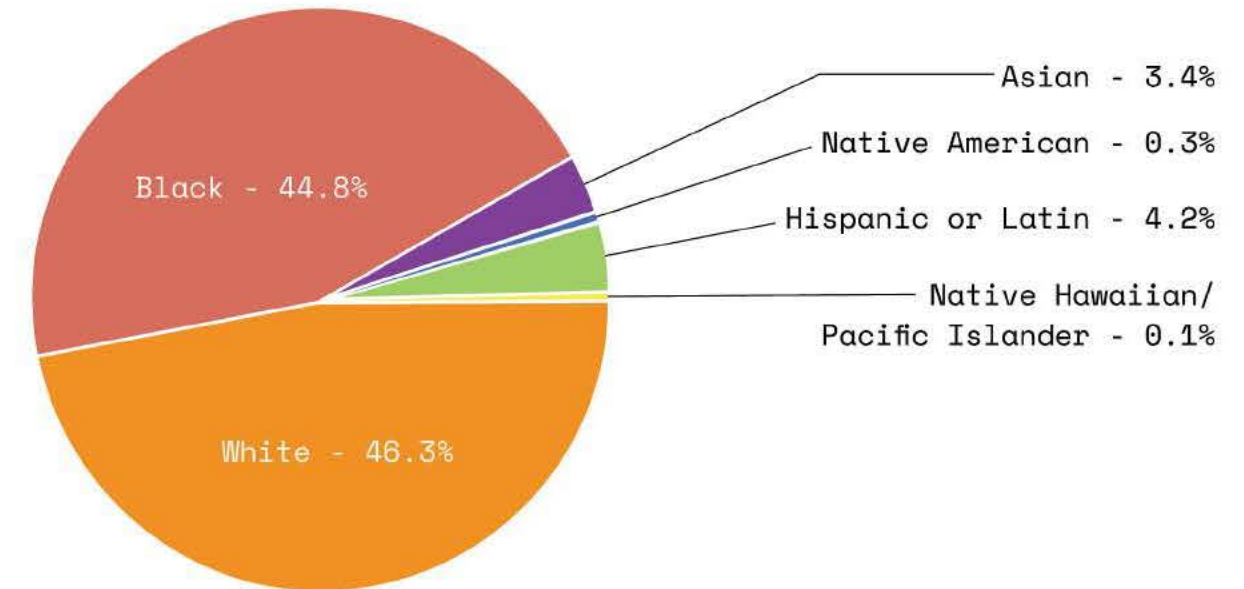


Fig. 062 | St. Louis population over time

POPULATION BREAKDOWN BY RACE

Fig. 063 | Population by race



POPULATION BREAKDOWN BY AGE

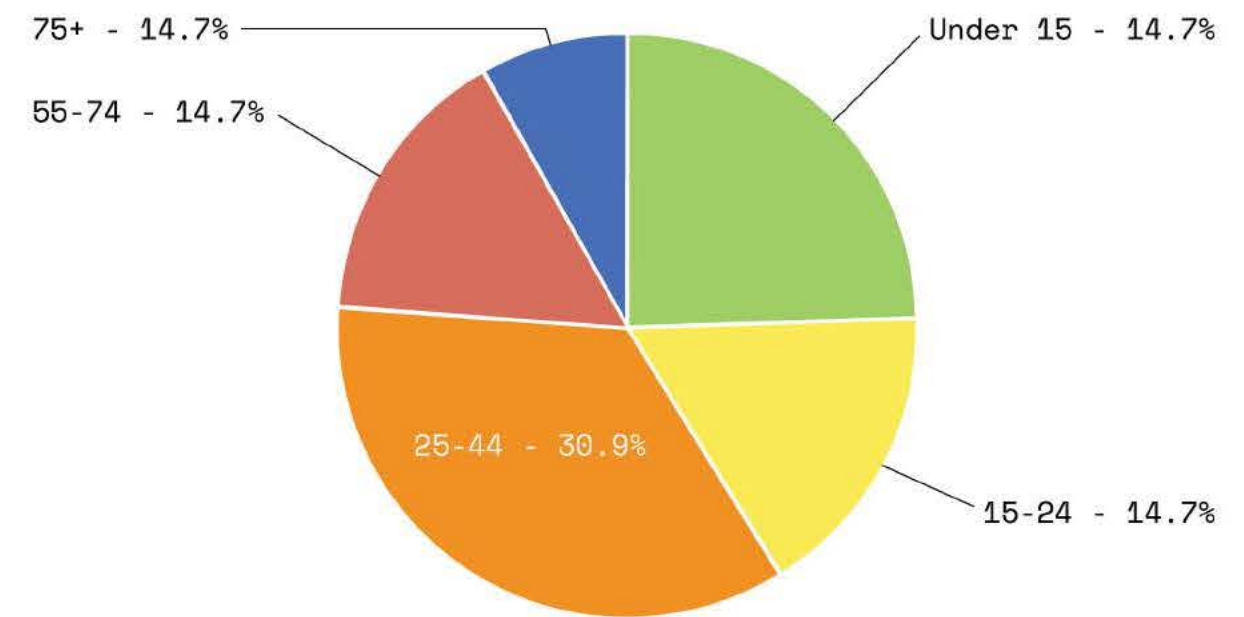
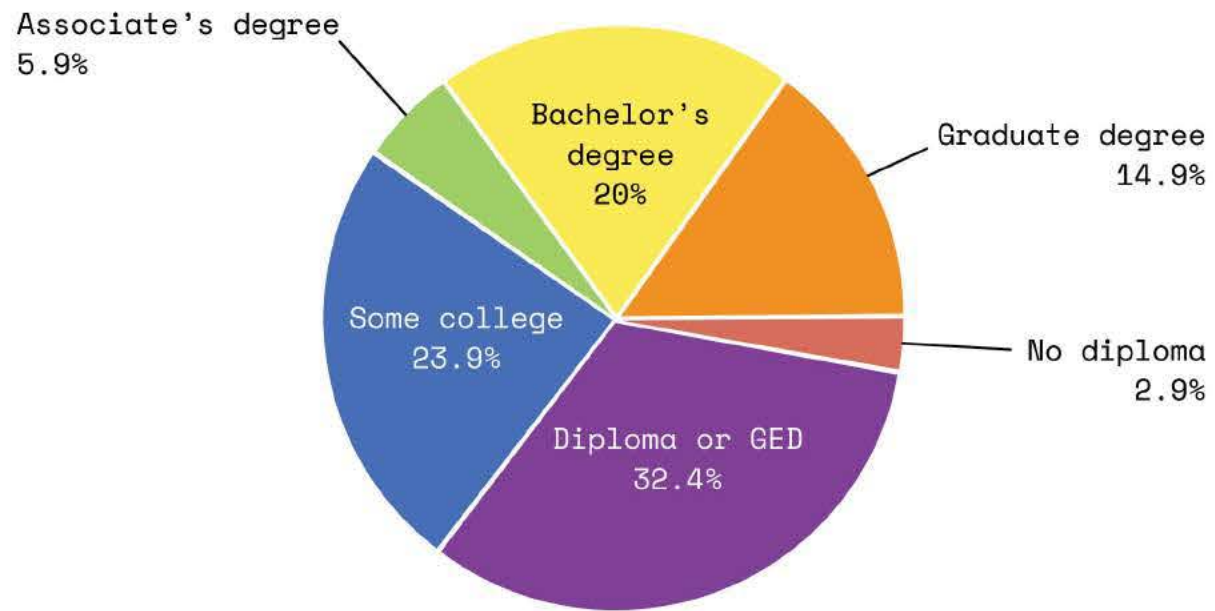


Fig. 064 | Population by age

Fig. 065 | Educational status

EDUCATIONAL STATUS



EMPLOYMENT STATUS

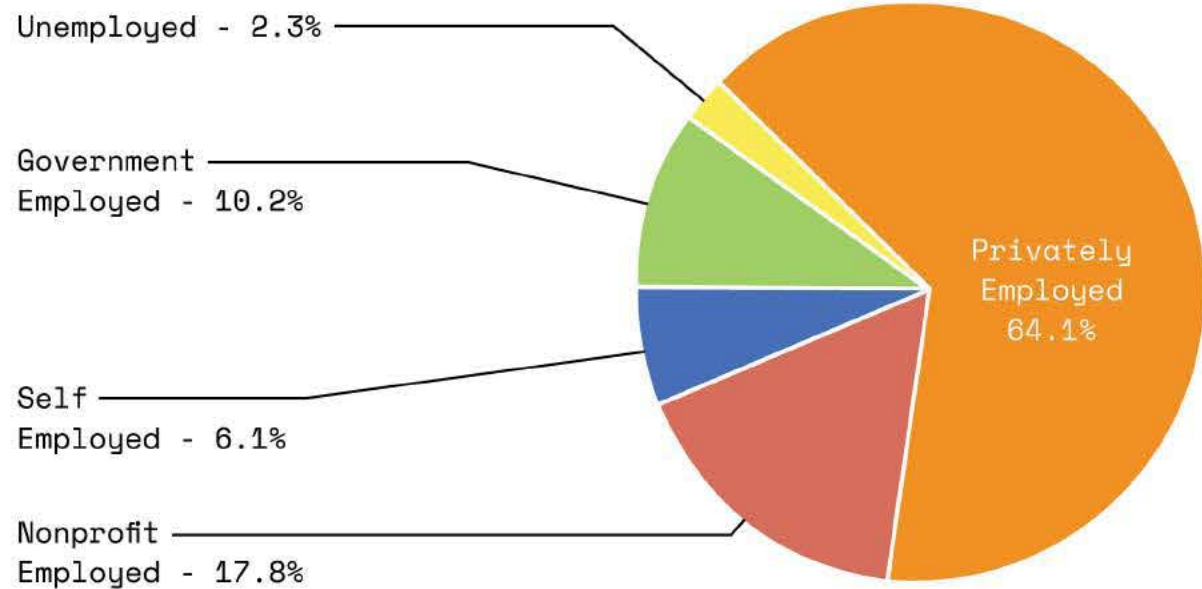


Fig. 066 | Employment status

HOMEOWNERSHIP STATISTICS

Fig. 067 | Homeownership statistics



Total occupied housing units:..... **138,891**
 Typical home value in 2023:..... **\$178,158**
 Average monthly rent:..... **\$1,152**
 Average monthly mortgage payment:..... **\$1,020**

ANNUAL HOMELESSNESS POPULATION

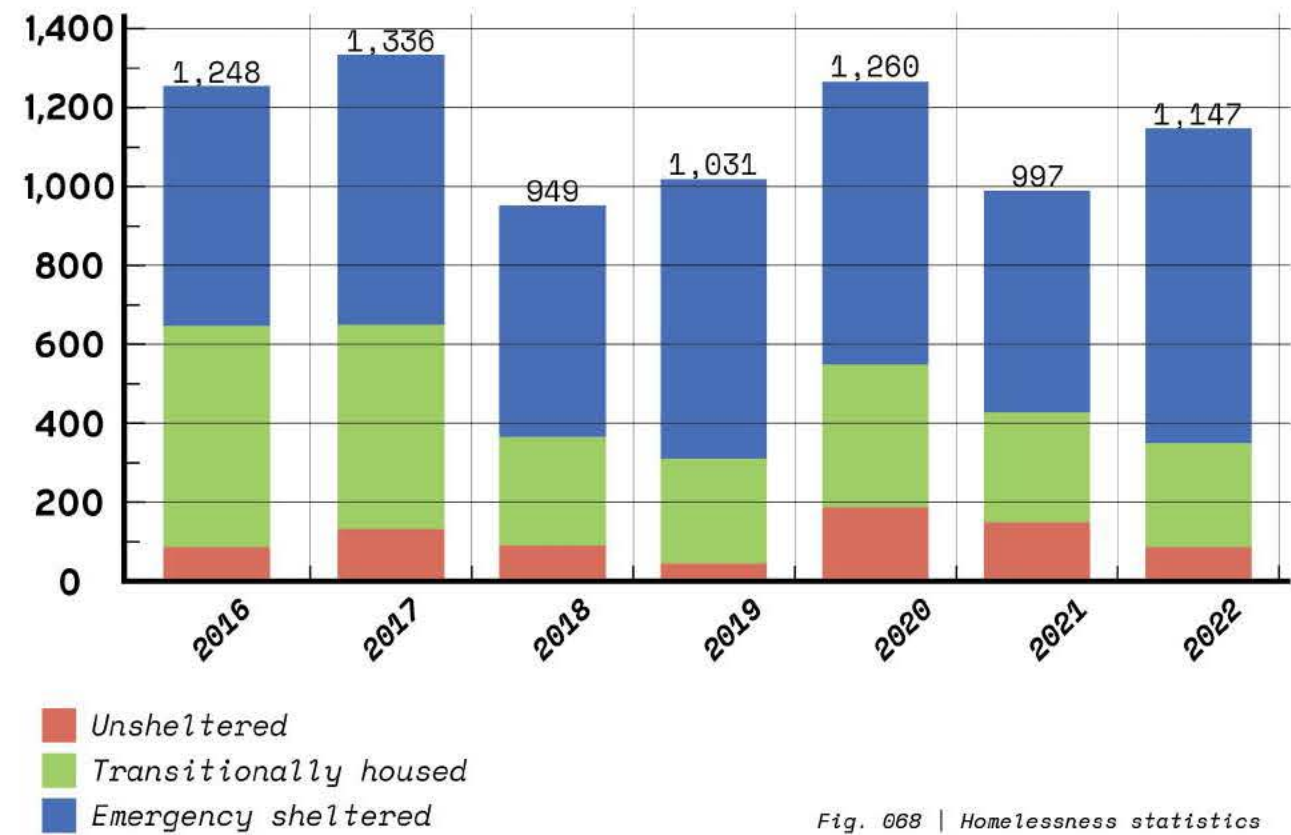


Fig. 068 | Homelessness statistics

DISTRICT CONTEXT

CARR SQUARE

The project site rests in the northwest corner of the Carr Square neighborhood, and is directly north of the western edge of downtown St. Louis. Directly north of the site is St. Louis Place, and bordering the western edges of these neighborhoods is the Jeff Vanderlou district.



Fig. 069 | Site district context



ZONING

ST. LOUIS ZONE D: MULTI-FAMILY DWELLING

LEGEND

- Local Commercial & Office
- Multi-Family Dwelling (D)
- Area Commercial
- Industrial
- Multi-Family Dwelling (C)
- Neighborhood Commercial
- Single-Family Residential
- Multi-use zone

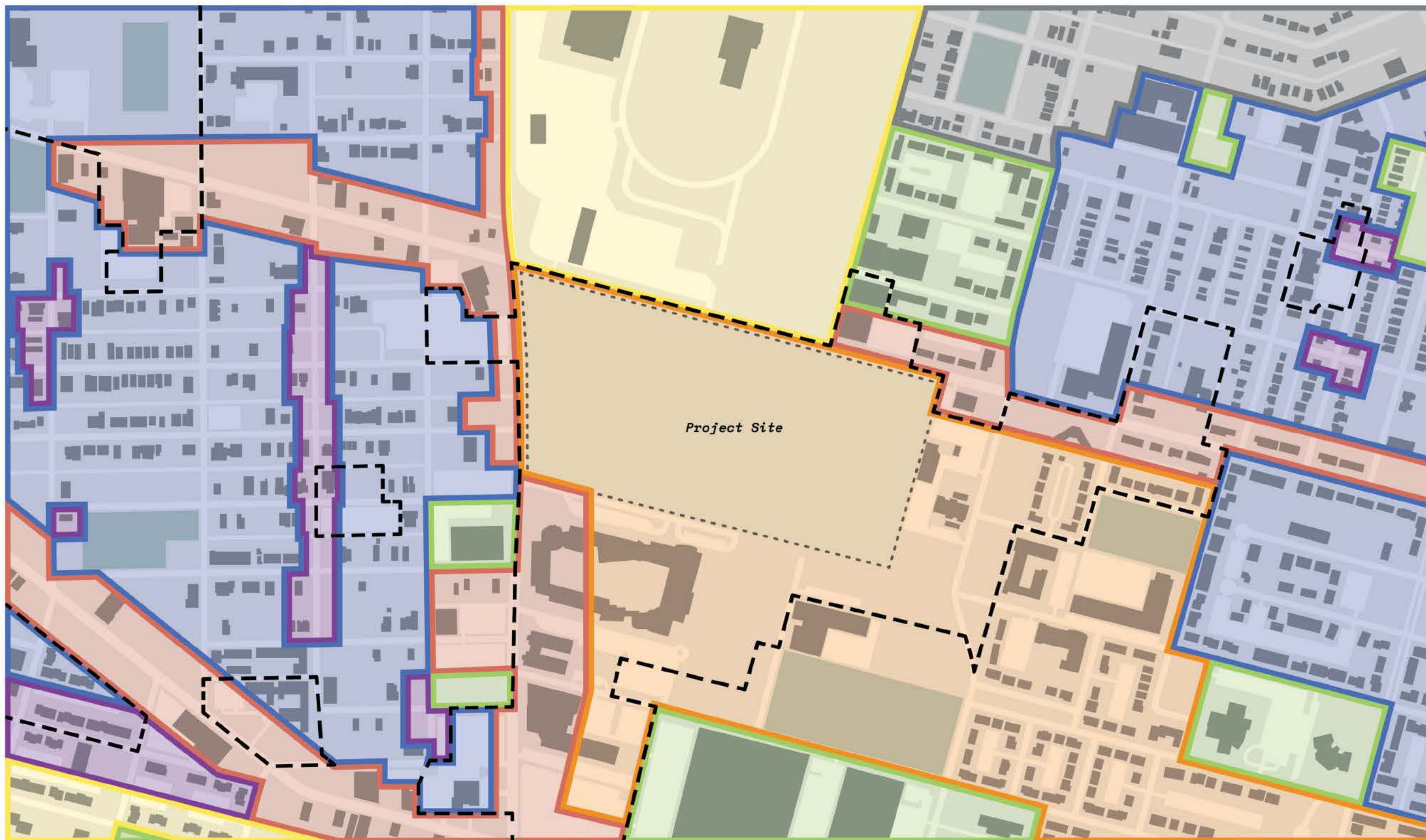


Fig. 070 | Zoning map

**ST. LOUIS CITY'S
CODE OF ORDINANCES,
TITLE 26 - ZONING**

26.32.015 - ZONE D PURPOSE

The purpose of the "D" Multiple-Family Dwelling District is to maintain older medium density residential districts, to preserve older architectural styles while encouraging a harmonious intermingling of other structures, and to provide for an increased variety and intermixture of uses free from other uses except those both compatible and convenient to the residents of such district.

26.32.020 - USE REGULATIONS

Any use permitted in the "C" Multiple-Family Dwelling District; •
(Town houses that front wholly and directly upon a public street, multiple-family dwellings, and parks or playgrounds.)

A canopy, open at the sides, may be provided in the required yard space of any building, for the shelter of persons entering such building from the street or other designated point of disembarkation from vehicles;

Accessory structures and uses customarily incidental to the above uses;

Temporary buildings for use incidental to construction work, which buildings shall be removed upon the completion or abandonment of the construction.

26.32.025 - CONDITIONAL USES

The following neighborhood commercial retail uses, provided that the use is confined to the first floor or basement of the main building:

bed & breakfast inn, day care centers, art galleries & studios, bakeries, barber & beauty shops, book stores, drug stores, dry cleaning pick-up stations, financial institutions, florists, gift shops, & hardware stores.

Greenhouses •

Hotels •

Nursing homes •

Professional and general offices not exceeding 3,500 square feet. •

Rooming & boarding houses, halfway houses, & penal institutions. •

26.32.040 - PARKING REGULATIONS

• Facilities listed in section 26.32.025 shall provide parking spaces sufficient to accommodate one parking space for each dwelling unit; and one parking space for each two beds offered for rent in rooming and boarding houses; and one parking space for every six beds, one parking space for every two self care units, plus one parking space for every two employees on the maximum shift in other facilities listed in said section.

• Any nursing or convalescent home, children's home or home for the aged shall provide parking spaces sufficient to accommodate one parking space for every six beds, one parking space for every two self care units, plus one parking space for every two employees on the maximum shift.

• Hotels shall provide parking spaces sufficient to accommodate one parking space for each dwelling unit or sleeping room.

26.32.050 - HEIGHT REGULATIONS

Dwellings, hotels and their accessory structures may not exceed a height of three stories and forty-five feet unless forty percent or more of the structures having the same frontage are higher, in which case a height equal to or less than the greatest height may be used. Any church, school, governmental building or hospital may be erected to a height not exceeding eighty-five feet, providing the side yards are increased in width beyond the area regulations one foot for each five feet of height that the building exceeds thirty-five feet.

26.32.100 - NEIGHBORHOOD DENSITY

Facilities listed in section 26.32.025 shall not be located within one thousand two hundred fifty (1,250) feet of another listed facility.

26.32.090 - DENSITY OF POPULATION

Detached single-family dwellings shall have a lot area of not less than four thousand square feet, except that lots of record prior to the effective date of Ordinance 45309 and new lots that equal the average density of the original platted parcels may be used for one single-family dwelling, provided the yard regulations of this section are complied with.

Town houses and two-family dwellings shall not have a lot area of not less than eight hundred fifty square feet or each dwelling unit therein.

Conversion town house dwellings shall not be required to have a minimum lot area.

Multiple-family dwellings units shall have a lot area of not less than seven hundred fifty square feet for each dwelling unit thereon, or as was lawfully provided in an existing building prior to rehabilitation.

Facilities listed in section 26.32.025 shall have a lot area of not less than 1,500 square feet for each dwelling unit therein; and an additional lot area of not less than 750 square feet for each sleeping room therein offered for rent in rooming and boarding houses; and an additional lot area of not less than 500 square feet for each person domiciled therein in other facilities listed in said section.

Nursing and convalescent homes, children's homes, and homes for the aged shall have a lot area of not less than 500 square feet for each person domiciled therein.

All new commercial uses shall have a floor area ratio of not more than 1.5

26.32.060 - FRONT YARD AREA

When 25% of a frontage within the district is improved with dwelling and a majority of such improved frontage has observed a front yard line with a variation in depth of not more than 6 feet, no building hereafter constructed shall project beyond the average front yard line so established, except that in no event shall the front yard line be greater than 50 feet. If less than 25% of such frontage is developed, then a front yard line for such frontage shall be the same as that for any other frontage located within two city blocks, as designated by house numbers in any direction from the site. If no such precedent is available, then the front yard line shall be a minimum of 10 feet, but may not be required to exceed 25 feet from the lot line at the front of the lot.

Notwithstanding the preceding point, no front yard shall be required to exceed the average depth of the front yard line in either of the lots abutting, and no front yard line shall be required to be greater than 40 feet from the front lot line.

26.32.070 - SIDE YARD AREA

- All detached dwelling units shall provide a side yard of four feet on one side and may provide no side yard on the other. All attached units shall provide a side yard of four feet for one end unit. The other end unit may provide no side yard. If a yard is provided on both sides of a detached dwelling unit or both sides of attached units, then neither such yard shall be less than four feet.
- All residential accessory structures need not have a side yard except as provided in section 26.32.080.
- If a side yard of four feet is not provided, as permitted above, a maintenance easement must be granted by the owner of the property abutting that side of the lot prior to zoning approval.
- All nonresidential structures and related accessory structures not exceeding three stories or 35 feet in height shall have side yard of four feet.

26.32.080 - REAR YARD AREA

- There shall be a minimum rear yard of 15 feet unless a side yard of 12 feet is provided, in which case no rear yard shall be required.
- All residential accessory structures need not have a rear yard.
- If, as permitted above, no rear yard is provided, a maintenance easement must be provided by the owner of the rear abutting property prior to zoning approval.

PUBLIC TRANSIT

LEGEND

- ⊗ Bus stop
- MetroBus M.L. King Route 32
- MetroBus Natural Bridge Route 4
- MetroBus Lee Route 41

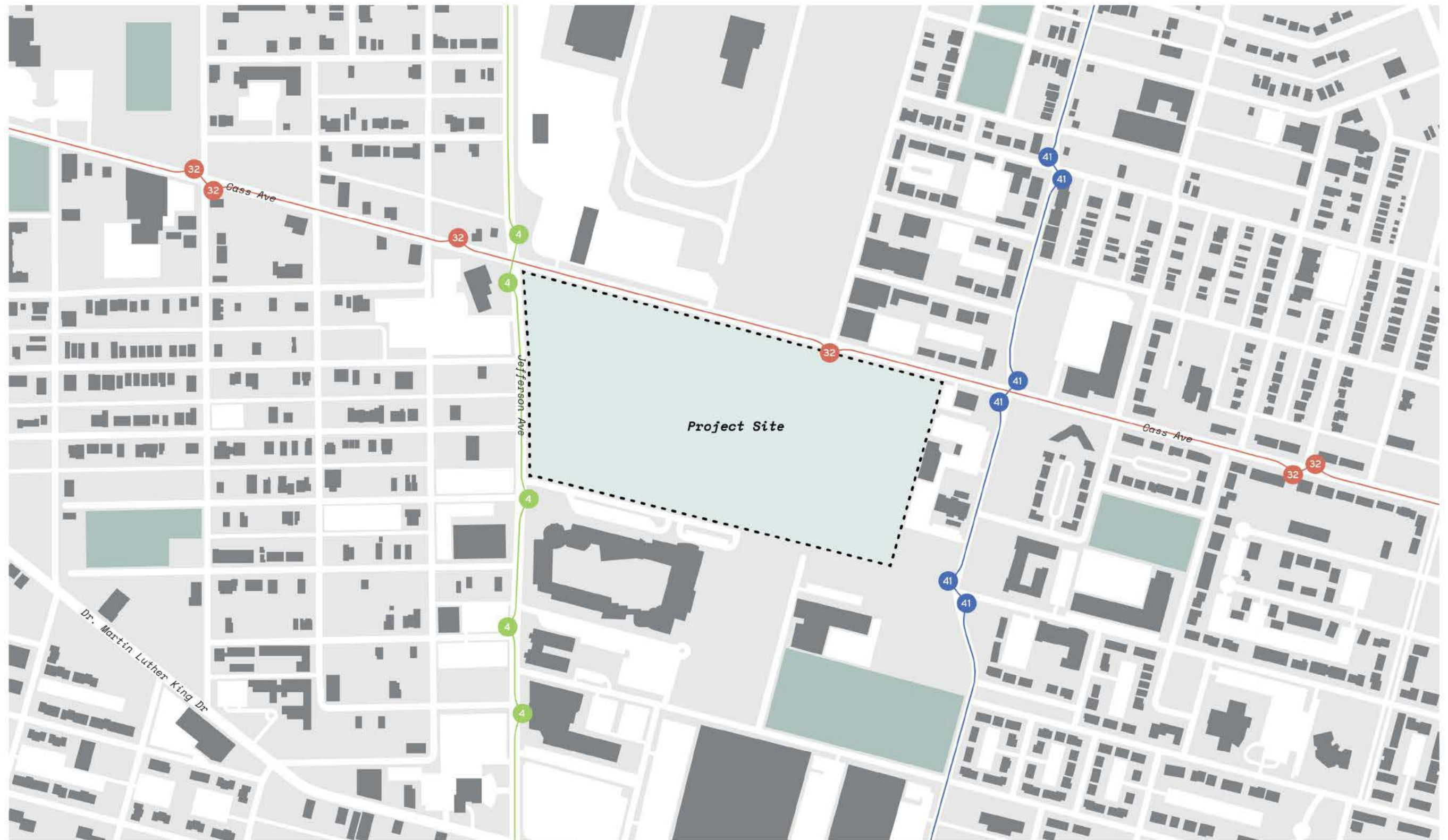


Fig. 071 | Public transit map

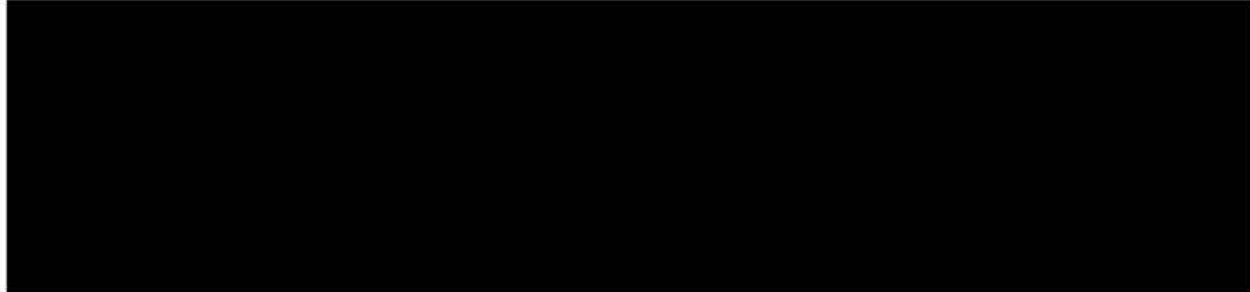


PUBLIC BUS TRANSIT

St. Louis is served by the Missouri MetroBus system. The project site rests in between multiple stops for MetroBus routes 4, 32, and 41, each of which connect the northwestern parts of the city to its downtown district within a 17 minute commute. From downtown, routes to other parts of the city and county can be easily accessed at different stops.

PUBLIC TRAIN TRANSIT

St. Louis is served by the Missouri MetroLink train system. The site is approximately a mile north of the nearest stations to access the train, which is split into two lines. The Blue line stems out from downtown St. Louis and reaches much of the western part of the metro as well as into parts of East St. Louis across the river in Illinois. The Red line reaches northwestern parts of the metro, and extends along the blue line into East St. Louis and beyond.



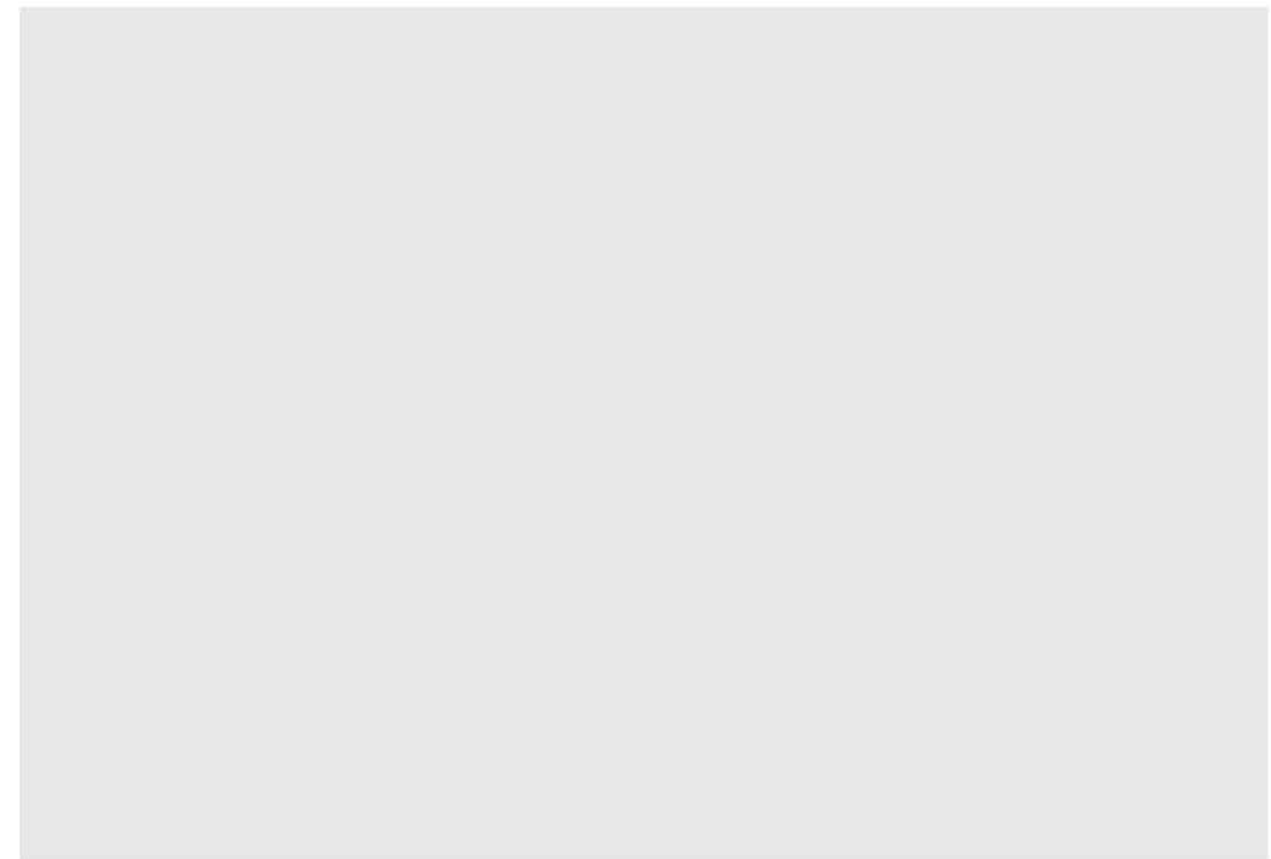
WALKABLE INFRASTRUCTURE

While St. Louis's downtown has a walk score of 85, the project site is much more car dependent as it scores a significantly lower 34. The neighborhood it resides in, Carr Square, is St. Louis's 44th most walkable neighborhood with an overall score of 61. To reach downtown from the site by walking, it would take approximately 43 minutes.

BIKEABLE INFRASTRUCTURE

The project site is in a moderately bikable area that scores a bike score of 40. There is minimal biking infrastructure around the site, no bike lanes directly flanking it but a series of wide paths connecting to other routes that can connect the site to downtown in approximately 11 minutes.

Fig. 072 | Bussing past the arch | Federal Transit Administration



POINTS OF INTEREST

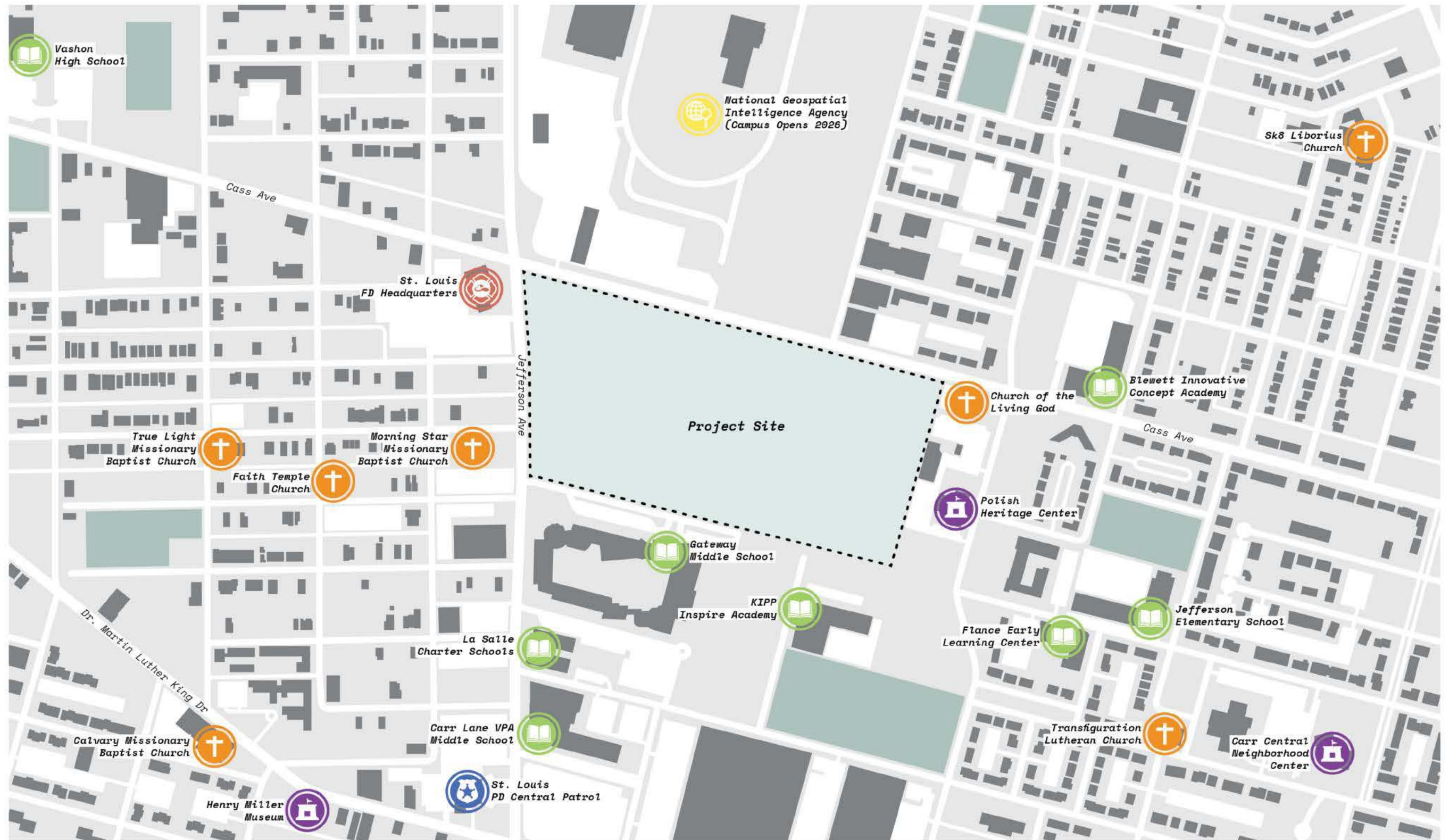


Fig. 073 | Nearby points of interest



LITERATURE REVIEW

THE ROLE OF ARCHITECTURE & URBAN DESIGN IN PSYCHOSOMATIC HEALTH

ALBERTO PÉREZ-GÓMEZ

In this foreword, architectural theorist Alberto Pérez-Gómez opens up and connects the concepts of atmosphere and consciousness. Specifically, Pérez-Gómez talks about the concept of *stimmung*, or rather the tone or mood that the collective qualities of an atmosphere set, and how that becomes a part of our conscious perception.

As living beings, we occupy and perceive the spaces around us, projecting our thoughts and feelings onto the world through the ways in which we interact with it. During our interaction, a reciprocal exchange takes place between ourselves and the environment, inviting emotions to be imparted from the outside world by acting upon it and thus being acted upon. Through this interaction with the environment around us, our thoughts, feelings, and emotions take up a physical place where they lie and are attached to, and that place is a part of our consciousness. This is to say that while we are affected and our consciousnesses are transformed by the environments we live within, we also transform the environments around us through our actions upon them.

Observing this phenomenon architecturally, it's easy to find historic examples of buildings that framed and connected a people's culture to the world around them, revealing cosmic and transcendental meanings about the societies who built these places. This is because historically, the role of architecture was to mediate between "man, nature, and the living cosmos,"; to allow humans to live harmoniously with nature and the universe. Thus, quality architecture must be

synesthetic, and not only reflect a people but also move them when they come to interact with the product of their collective experience.

The challenge of architecture today is returning to these principles, as methods of craft, economics, logistics and a myriad of other functions get in the way of culture coming through our built environments.

THE EYES OF THE SKIN

JUHANI PALLASMAA

In this text, the themes of synesthesia induced through quality design are expanded on by author and architect Juhani Pallasmaa. Pallasmaa highlights the importance of quality design through identifying the benefits we experience to our health when we interact with the natural world, stating "a walk in the forest is invigorating, and healing due to the constant interaction of all sense modalities".

Through the same sort of experience that a walk in the forest offers, meaningful design can create a strengthened spirit of self. This recalls and echoes the conclusions that were drawn based on reading *The Role of Architecture and Urban Design in Psychosomatic Health*.

Going further to identify problems in our contemporary environment, Pallasmaa also claims that "we have lost our sense of intimate life, & have been forced to live public lives - essentially away from home". In this critique, he refers to our lazy designs unresponsive to how we actually live, specifically that of the large glass boxes being designed by modernists of the mid twentieth century. Instead, Pallasmaa proposes that good design occurs when we design with integrity, and create spaces that respond to how we truly perceive the environments around us, rather than just imposing orders and arbitrary forms upon ourselves.

ON THE RELEVANCE OF PHENOMENOLOGY

DALIBOR VESELY

In this seminar, theorist Dalibor Vesely offers a foundation for the importance of phenomenology and its relationship with the built environment. He states that “phenomenology is an attempt to understand from the inside, and not to dismiss or criticize from the outside”, indicating its dealings with the perceptions we have and relationships we share between our conscious selves and the environment we’re in.

Vesely heavily stresses the importance of culture, symbolism, and meaning in phenomenology. Their presence is crucial to one being at home within a built context, as they orient and anchor cultures and thus the way we live our lives. To demonstrate the effects of a lack of this sort of context, as well as indicate a problem with our profession, Vesely offers the idea that a stage director may be more optimistic about their world than an architect would be about theirs, possibly as a result of imaginative restrictions about the environment being imposed upon them. To close the seminar and provoke further examination of the subject, the question of how art and science may be bridged today is raised. Given that science has evolved and been integrated into most of the global consciousness to become a basis for all of our perceptions of “reality”, art and opportunity for interpretation is often left out of our built environments, disrupting our understanding of the world around us and disconnecting life from ritual. We assume that through science, we may have pure control over our perceptions of reality. If we are to reconnect art and science in the pursuit of approaching design with a phenomenological emphasis, we must realize the significance of a collective force larger than ourselves that constitutes the events we experience. That force would be the human experience and the constellation of relationships that we all share between one another.

ARCHITECTURE & THE CRISIS OF MODERN SCIENCE

ALBERTO PÉREZ-GÓMEZ

In this introduction, Pérez-Gómez identifies and expands on issues within contemporary architectural design. He begins by defining architectural design as the creation of order relative to the body’s own. Through this perspective, he challenges the merits of functionalism relative to theory and phenomenology, raising the question of whether logic should be deemed as an absolute model of thought in design. If this were to be the case, it eliminates the possibility for art to be understood as knowledge, and thus strips architecture of the ability to respond to and inform our human experience. Functionalist perspective on design limits theory and forces reality and theory to struggle in their connection. Instead of designing to explore and reflect a human experience, it forces efficiency and economics without addressing any justification for their context in our culture or our built environment. As a response to the restrictions that functionalist design imposes, more traditional Vitruvian principles like firmitas, utilitas, and venustas, may be called upon as the primary objective for design in an effort to more properly situate ourselves in the natural environment today. Coming away from this introduction, I question why we must prioritize some scientific “truth” based on efficient functional design as the ultimate goal in design. Limiting the goals of a project to just this loses sight of the humanistic qualities that design can respond to and fulfill.

RESEARCH PRESENTATION 1

SEPTEMBER 12, 2022

While I don't feel as if I've designed in a way that fulfills it yet, I've found myself most passionate about delivering architecture for people instead of just investors or competition judges - it's fun to create cool designs for projects without much regard for cost, context, or human impact beyond our appreciation for visual aesthetic, but I don't want to just be some artist of structure who's in it for the personal achievement and financial gain. So for my thesis this year, I want to take on America's unique housing crisis, and seek a model of support for those at the edges of society who are often forgotten or cast aside, while discovering how we can use our role as designers and creators of the built environment to uplift and ensure the security and opportunity that these people deserve.

I think that it's ridiculous that in the richest country in the world we still have hundreds of thousands of people who suffer from poverty, hunger, homelessness, and a myriad of other issues that intertwine and cause these people to become left behind by our (lack of) social safety nets. Meanwhile, us privileged and comfortable individuals lean back in our cozy homes and scrutinize them when they appear on the news in some negative light, blaming them when we see the abuse, suffering, and crime that they often are thrust into, all while still believing in the illusion of meritocracy in America, as if we're somehow any better than those humans because we "made it".

Our societal structure has allowed us to become detached from this crisis though, in any manner besides a financial one. How is it that when we speak about the housing crisis, the majority of the conversation revolves around the economic rates and artificial scarcity of supply, rather than the cost of lives that are thrown out or disregarded? We could easily be speaking about our brothers, sisters, parents or grandparents who slipped through the cracks and are truly suffering as a result of the issue, yet we're so detached from each other and focused on ourselves that we don't make that human connection.

In *The Role of Architecture & Urban Design in Psychosomatic Health*, the author spent a bit of time talking about the physical space that our conscience occupies. They stated that the way we feel isn't explicitly internal, but can be externalized and manifested in our environments, communities, and cultures. With that line of thinking, they also claim that our thoughts and emotions "come over" - we can invite them voluntarily, but ultimately they still come from the outside. Through technology and social media however, we've learned to occupy digital spaces and severely limited the space that our consciousness actually occupies in the real world. I think we've become terribly good at filtering the emotions and feelings we invite, and as a society are disconnected from the world by a collective affinity for individualism, pride, vanity, consumption, and control that we think we have over what we experience through the use of technology. I know I'm guilty of indulging in these values, and frankly have no standing to preach to you all about it, but if I don't recognize these faults and use one of the main focuses of my life - my career - to address them and hopefully forge a better future, then what's the point?

I believe in our roles as designers, we have a moral duty to be good stewards for all people in our communities, not just our primary clients, contractors, and compensators. Again in *The Role of Architecture & Urban Design in Psychosomatic Health*, the author wrote that "the role of architecture...is to mediate between man, nature, & the living cosmos...allowing humans to live harmonious lives". When we're at work designing high end apartments for Kilbourne, Roers, or really any large developer you could think of to build downtown, we're doing anything but that for the majority of our population. For example - downtown Fargo's historic revitalization project may be in the public realm and advertised as something that uplifts everyone in the community and makes it a better place, but it's clearly exclusive of the majority of people living around here who can't afford to be a part of it. I see people at the edge of society every day on my walk to Renaissance or work who are most definitely excluded and sometimes literally being forced away by other "regular" people downtown. We all know who I mean - the people that we do best not to look at, ignore, and try to cast out of our minds so we can maintain a pure utopian image of our small urban haven. How is that a harmonious existence? Historically, architecture

was a ground up approach that framed and connected people's culture to the world around them, revealing something transcendental about a place and its inhabitants. It wasn't made or sponsored by one single "genius" who simply had the wealth and opportunity to buy out large swaths of property to keep profiting off of. If we aren't attempting to return to this communal approach, what makes us any different from the investors, contractors, and developers we see profiting off of this gentrification and furthering the housing crisis?



Fig. 074 | Walking past homelessness | John J. Kim via the Chicago Tribune

In the text, *On the Relevance of Phenomenology*, the author asked us how we could bridge art and science in the modern world. This question is raised because much of our cultural perception of reality is based in science, stats, and "objective" facts. We rarely account for the very real but seemingly indescribable side of humanity that makes us feel the way we do about our environments, regardless of the science. I think this cultural shift is in large part responsible for ultimately pushing our profession towards economic efficiency and disregard for the context of many of our projects beyond aesthetics and consumer analysis.

I want to attempt to rebuild this aforementioned metaphoric bridge with the ultimate goal of designing a model of shelter that goes beyond affordable housing, and becomes unconditional housing while using design to reflect our reality and rehabilitate the psyche of all inhabitants - not only those of the project itself, but of those in the community who will have any level of contact with it. I think this is a project that will find both science and art crucial to its success in equal parts, as obviously there are economics and politics to consider for such an idea, but also perhaps biophilia, culture, and vernaculars to be explored and implemented.

In *The Eyes of the Skin*, the author states that "a walk in the forest is invigorating & healing, due to the constant interaction of all the sense modalities". For me, such a setting for walking feels primal and perspective shifting; like I'm at home in the greater universe, a small part of a greater whole. It's a synesthetic experience that I don't think I'd be very good at putting into words, but many of us experience it the same way. Yet, upon returning to the environment that humankind has made for itself, I often lose that feeling. My senses are all still engaged in the same manner, but the perception of the world around me is constrained to established and seemingly misprescribed geometries, artificial smells, feelings, and invasive sounds. Science has led us to designing to achieve ultimate statistical success and function, yet as is stated in *Architecture and the Crisis of Modern Science*, functionalism limits art & theory, forcing efficiency and economic values without any justification for its context in our culture. Why do we have to try and prioritize some "truth" based on max result for minimal effort? We're losing sight of humanity in this process. Another quote in *The Eyes of the Skin* sums this perception of built space up quite well: in our created environment, "we have lost our sense of intimate life, and have been forced to live public lives essentially away from home".

Summarily, I believe it'd be incredibly valuable to explore various methods of formal development in relation to nature and our own bodies as a means of achieving space that can create a strengthened spirit of presence in the world and a reinforced sense of self.

On the other side of this bridge, the more scientific one, I want to engage in cost and political analysis of how this idea could come to reality. I don't believe



Fig. 075 | A walk in the forest

that a project like this could come from a landlord or sole investor buying up property and putting up a private project - in order for there to be a truly communal design that benefits us all, it needs a collaborative grassroots approach.

Additionally on this side, this project - like any other contemporary design - has an opportunity and I'd argue a duty to become symbiotic for both our natural and built environments. I'd like to be able to answer how a building can maximize its physical and cultural resilience while also being sustainable and "green". These answers may come from studies of biophilia, energy management, and construction methodology, but I'd bet they may also be found in historic and even primal modes of inhabiting the world around us that aren't necessarily addressed in contemporary research.

I realize that the way I've composed these thoughts has ironically separated art and science thus far while talking about bridging them. I meant to categorize them so that both sides are explicitly recognized, but the two can be blended together in the process that I'll embark on this year. Political and economic analysis can be done with theory and empathy rather than statistics. I'd argue that the way we organize our civilizations in these manners can even be an art, one that's focused on life and collective feeling, and channeled through a lens of empathy and compassion for the common citizen. We can also embrace art and symbolism in design while understanding and evaluating its effects on ourselves and our environment. Statistically sustainable design methods can be incorporated as mediums of art and expression, literally making a statement or expression of our intentions for the world we'd like to live in.

So I guess what I'm trying to say in total is: I want to take on America's housing crisis. It's one of the biggest barriers to living what I'd consider a secure and prosperous life, and I think our profession is generally exacerbating the issue. While doing so though I want to create something that focuses on uplifting and healing our collective psyche, communities, and natural environments as well. Returning to what I said in the beginning of my spiel about the societal perception of the crisis, I want to be able to reframe it from a human perspective rather than an economic one for my audience, one that has more empathy for the homeless than it does for the homeowner. After all, if I believe in a community approach to fixing the crisis, that would require a community that believes in the same thing.

THE DOMESTIC & NUMINOUS IN SACRED ARCHITECTURE

THOMAS BARRIE

In this essay, architect Thomas Barrie dissects the nature in which we've built domestically throughout human history, and specifically examines how the phenomenon of home became a sacred thing that would manifest itself in religion and religious architecture. Originally, religious "houses of the lord" would come to be within the dwellings of the people who would profess the word of their faith and become religious leaders. Their houses became places where stories were told, and thus became storytellers themselves.

Dura Europos was the first house-church that was constructed in what would be modern day Syria. Its surfaces were adorned with religious imagery and text, being a storyteller itself. In this personification of the house, the sort of place that is fostered within it becomes one that joins people within it, unveils realities that are otherwise unseen, and connects those people to what would otherwise be inaccessible.

The unseen and inaccessible realities that the sacred place unveils are the intangible forces that bind us together as humans, and guide us blindly through the paths of our lives. When we are in significant spaces that move us to unlock these realizations, we become better able to fulfill the spiritual capacities that we have as humans.

BUILDING, DWELLING, THINKING

MARTIN HEIDEGGER

In this essay, German philosopher Martin Heidegger addresses the housing crisis being experienced in Europe after World War Two, but he approaches the topic from a widened perspective of housing and changes our understanding of what it means to be at home.

To start, Heidegger identifies building and dwelling as one to another as a means and an end. To build is to dwell. He points out that we dwell where we rest, work, learn, meet, and so on, as dwelling is something that occurs everywhere that we are. Dwelling is the way in which we as mortals exist on the Earth. Heidegger digs into this phenomenon of dwelling further though, examining what the state of being a mortal human means. To be a mortal human is to be alive on the earth; we live on the surface of the earth, which constitutes being under the sky, and thus being before "the divinities".

Earth is the realm that serves us life, and that we experience it within. It is the land, water, flora and fauna that generate the context for our existence on the surface of our planet. Sky refers to the sun, moon, and stars we trace our universal location from, as well as the changing of the seasons, and the phenomena of weather. When the sky reaches down to touch the Earth, it offers and takes away life on it. Divinities are the forces beyond our control. They may be thought of as gods or higher beings guiding our lives, or through a secular lens: the material conditions which we exist by. Each of our lives are at the whims of thousands of miraculous chances each day. Even our coming into existence in this time and place in the grand context of the universe is infinitely impressive, and is the product of these "divinities" or series of circumstances. Finally, mortals are us, human beings. We are at the mercy of the earth, sky, and divinities, but have also become masters of the three. What makes us unique in our mortality as human beings is our recognition of death, and thus our recognition of death as that which gives significance to all of our actions.

Heidegger points to the reciprocal relationships of the four - earth, sky, divinities, and mortals - as belonging together in order to constitute the state in which we dwell as humans. He refers to this

organized context of things as the "Fourfold". Returning to his introduction to building and dwelling, he now illustrates how we might build in order to dwell, or rather in a way that preserves the Fourfold.

First, Heidegger identifies that there is a distinction between building in a way that cultivates things that grow, and building in a way that simply constructs buildings. In order to cultivate, the essence of the fourfold must be brought into the things that we build. A bridge is used as an example to illustrate this concept.

The bridge crosses a stream and establishes the sides of the water as banks, and each side of the stream as here and there; "The bridge gathers the earth as landscape around the stream". The bridge orients the stream through the landscape, thus leading the sky's waters as they flow towards the oceans. Simultaneously, the bridge shelters from the sky under its arch, holding strong as it receives the rains from above and sheds them back into line. The bridge lets mortals pass over it on their way to other highways, connecting them to the rest of the world. This connection serves to resurface metaphorically, as the bridge symbolizes a final path taken to meet the divinities.

Heidegger now carries this bridge example further, when discussing the essences of place and space. The bridge is what constitutes place on each side of it and relative to it; the bridge itself is a place that defines the spaces that it passes through. Speaking of space in this way though makes it seem as if space is something that we stand apart from or as if it is an external tangible thing. This is not the case.

Instead, we are within space and connected to all things that are in the Fourfold. Heidegger argues that we don't merely represent distant places in our mind when we recall them. Rather, he proposes that we bring ourselves to places through thinking, and when we do so are more "there" than the people who pass through those places indifferently. We can bring a place forth through thought, just as building can bring forth the fourfold. This sort of "bringing forth" that we do both through thinking and through building is how we as mortals preserve the fourfold, and how we dwell.

Returning once again to Heidegger's introduction, "to build is to dwell", thus dwelling is building. We must allow the way that we think and dwell within the fourfold constitute the way we build, rather than depend on the consequences of politics and economics, if we are to bring forth and sustain the fourfold in our buildings. Building and thinking are both inescapable for dwelling, but are mutually dependent in order to sustain it. If a housing crisis (in the context of the essay Heidegger speaks of the crisis in Germany post World War Two, though this is being applied to the crisis in contemporary America) is to be

addressed, we need to properly address the true "plight of dwelling".

Heidegger defines this plight as man's continuous search for the essence of dwelling, without ever learning how to dwell. He questions the extent to which we are homeless, if we cannot even identify this phenomenon as the plight of our own dwelling. In order to accomplish proper dwelling, we must build by consequence of dwelling, and think for the sake of it.

TAKING UP RESIDENCY IN HOMELESSNESS

VILÉM FLUSSER

In this writing by Czech-Brazilian philosopher Vilem Flusser, he discusses his own experience with "homelessness" through his relationship to so many different cultures and geographic places. Essentially a cultural "master of none", Flusser speaks about the intricacies of his experiences relating to multiple different cultures, while defining what "home" means for humans as opposed to "a home" or simply physical shelter. He refers to "home" as a sense of belonging created by intangible ties made through cultural practices that we share with one another.

Flusser begins his discussion by stating that in our now post industrial world, we are finally able to have "a home" as humans unlike our ancestors from the past ten thousand years. He attributes this essentially to our technological capability for connecting to each other, and points to immigrants as pioneers of the future for their connecting to new people and cultures, finding themselves totally resituated amongst people who are biologically the same as those from their "homeland". To justify this claim, Flusser draws on his own experiences across multiple different places where he has lived.

Born in Prague in the 1920's to a Jewish family, Flusser was forced to evacuate to London as a young man during the Nazi occupation of the second world war. Ultimately, he lost all family members to concentration camps, and following his graduation from university in London after the war, he immigrated to São Paulo, Brazil. While he had experienced displacement and homelessness as a result of the war, it was in Brazil where he experienced it most fully, and draws most of his examinations from.

In the early to mid twentieth century, São Paulo resembled characteristics of the early American colonies, containing an amalgamation of people from different parts of the world, and lacking any established

communities of similarly oriented individuals. Here, Flusser did work at the philosophical institute, which he recalled as beginning as a philosophically free and diverse place, on account of the lack of any pre established notions amongst the diverse group of people that came together to create it. Over time however, culture crystallized along with Brazil itself as a homeland for its immigrants, creating barriers between citizens again based on their lived experiences. Through his recognition of this phenomenon and through similar experiences in moving to France later in his life, Flusser identifies "home" as the people to whom he is responsible to, his fellow citizens, neighbors, friends, and loved ones, rather than the physical location that he stays at.

In recognizing this responsibility to others as home, it is revealed that being at home is being with the "other". We must learn to overcome prejudices, and join with the "other" in order to create truly beautiful places that unite us with others.

THE POETICS OF SPACE

GASTON BACHELARD

In this book, French philosopher Gaston Bachelard explores the essence of spaces through a poetic lens. Early on in the introduction, poetry is described as a sort of "freedom", as it transcends barriers of language and allows us to embed implicit meanings and opens up room for interpretation. Through this sort of freeing, Bachelard explores various qualities and kinds of space from an entirely untethered perspective and specifically examines them from an oneiric point of view.

Bachelard cites Swiss psychiatrist Carl Jung for the concept of topoanalysis, which examines psychoanalysis relative to the locations that we recall in our daydreams. Using this sort of study, he justifies the importance of this poetic spatial examination: our imagination augments the values of our realities. For instance, we perceive the house as our first universe as children; it is our own small cosmos. Each of us unconsciously reside in an oneiric house manifested from these original cosmic constructions. This space is one of safety, comfort, and peace.

To illustrate how different qualities of places incur differing consequences, Bachelard goes on to use another reference from Carl Jung, citing a theoretical situation in which a strange noise in the night comes from somewhere in the house. While ambiguous, the sound seems more likely to have come from the cellar, though in this scenario the subject would rather check the attic first. This is significant for Bachelard's topoanalysis. While the attic may be scary, it's lifted up in our space

and has access to light. Rationally, it's simply the top bit of our constructed shelters, and is a protective layer between ourselves and the outside. The cellar on the other hand is dark, slow, and mysterious. Its depths become endless and irrational in the absence of light, and we dwell specifically above it. We avoid the mystery and the unknown within the cellar, and prefer instead to go where our minds make better sense of.

Thinking about spaces in these ways personifies them, and gives added significance to the physical environments that we occupy. There are intangible qualities and conclusions we draw about spaces based on the way that we think about and interact with them over time. This is how a house becomes a maternal guardian, sheltering us as her children from weather above and keeping us warm. To quote Bachelard: "Inhabited space transcends geometric space". The personification and constant reinterpretation of spaces forces us to exist in a state of impermanence rather than one of finality. Bachelard argues that it is better this way however, as living in this manner allows for us to "dream of tomorrow".

A RETURN TO...

ARCHITECTURE & THE CRISIS OF MODERN SCIENCE

ALBERTO PÉREZ-GÓMEZ

Returning to this text, this section of this reading focuses on Stimmung, or rather the atmosphere generated by architecture, and the way that culture and architecture have evolved to generate it today. Pérez-Gómez states that "architecture must create appropriate transformative atmospheres," that accommodate habit but also bring about both poetic and ethical change for the people who experience it. This trait is used as a critique for much of the contemporary building that we do, as it often lacks any characteristics whatsoever that would help to formulate an environment conducive to the sort of productive change that Pérez-Gómez talks about.

While architecture historically was built to facilitate poetic change and connect people and place, the evolution of western culture over the past two centuries has led to the disintegration of much of the integrity of the architectural practice as a whole. We no longer design for the purpose of our shared rituals or cultural phenomena that occur in our occupied space. Instead, we cater to self beneficial consequences, like profit or professional recognition.

To identify the origin of this shift, Pérez-Gómez cites Giorgio Agamben's *Homo Sacer*, specifically in the analysis of the French Revolution and its widespread effects. After the end of the French Revolution, all people were born equal, and all life is sacred. We have strayed further and further from the collective view of monarchs or divinities having control over our lives, and have each been in our own pursuit for maximum control over our lives. This will to be fully in control has led to detachment and exploitation among each other as human beings, as well as the cultural instillation of hedonism and ultimately nihilism.

Politically, there's been monumental shifts in how we govern ourselves. In order to rule over a body of people who are each considered equally sacred, we've had to put in place rules and regulations, as well as bodies of surveillance and control. Often, due to their own will for greater control, these institutions are themselves corrupted. The original values of the French Revolution, liberty, equality, and fraternity, have each been manifested as global horrors in their most extreme cases due to the infinite desire and capability for control by small groups of people in the past.

Specifically in the contemporary United States, the average person's reverence for hedonism as well as their individualistic tendencies puts our collective population at risk of animalization, when capitalist innovation ultimately creates a product that fulfills all of our desires and puts us in complete control of the simulated experiences we can derive.

THE POSSIBILITY OF AN ISLAND

MICHEL HOUELLEBECQ

In this dystopian, sci-fi novel, themes like hedonism and individualism are shown in their extreme. The story's main character, Daniel, is initially a wealthy comedian who possesses most of life's material joys, but who is also lacking true love, and an understanding of this sort of immense feeling. Daniel eventually joins a health-obsessed cult that clones themselves for pseudo immortality, and while he slowly retreats to experiencing life without any hardships through the technological advancement his selves enjoy over the course of twenty-five generations of cloning, the world outside of Daniel's cult is reduced to a wasteland caused by nuclear annihilation and climate change, with humans reduced to barbaric hunter-gatherer tribes for the most part over the course of this time.

Being that the twenty-fifth Daniel is entirely tuned out of the real

world and instead lives exclusively through a metaverse that fulfills all of his desires, he's entirely removed from the fourfold. He shares no real relationships with other people, nor with the earth or sky, as he harnesses control over all that he experiences within his virtual utopia. Eventually, coming across old love letters that had been written and stored by Daniel's original self, the twenty-fifth clone realizes his alienation from the world. The story ends when Daniel leaves his confines after generations of insulation from any hardship whatsoever in search of a reconnection through emotions, and meets his demise in the wasteland outside of his cult.

The story acts as an almost satirical critique of our contemporary society, as we're becoming more and more indifferent to one another and closer to the hedonists in Houellebecq's dystopia. It works with the other readings so far as an example for the problem that is exacerbating both itself as well as the "plight of our dwelling".

RESEARCH PRESENTATION 2

OCTOBER 12, 2022

Last time I spoke on my thesis interests, I delved into the idea of physical homelessness, and how we leave behind those worst off in our culture due to our individualism and lack of collective action. I was interested primarily in finding a way to uplift those who had otherwise been left behind, and wanted to search for a mode of shelter that didn't become an investment vehicle, driven through economics more than human necessity. In reading and researching since then, I've dived into the deeper meanings and concealed issues in this topic, finding that my initial idea for an approach may just be an already failed solution, unless framed in a totally different type of society than our own.

So now I come back to deepen the plot, and I've had to ask myself a simple question: what even is a home? In reading on this subject, I think I've got a much broader, all encompassing answer to this. Home isn't just the house or shelter we occupy. Instead, I've found in reading from Thomas Barrie on sacred domestic architecture that home occurs at three different levels.

*To lay them out in varying scales relative to ourselves, I'll start with explaining the mind as a home. In reading *The Poetics of Space* by Gaston Bachelard, I came across his idea of occupying an oneiric home - or basically a dreamed space - that fulfills part of our sense of wellbeing. Think about the last time you dreamt about doing a hobby of yours, or relaxing in a cozy space, or just being away from the rest of the world. In that thought, where did you depict yourself? It probably wasn't just an image of yourself in a void, but more than likely you were somewhere you recall - your childhood home, or a comfortable place*

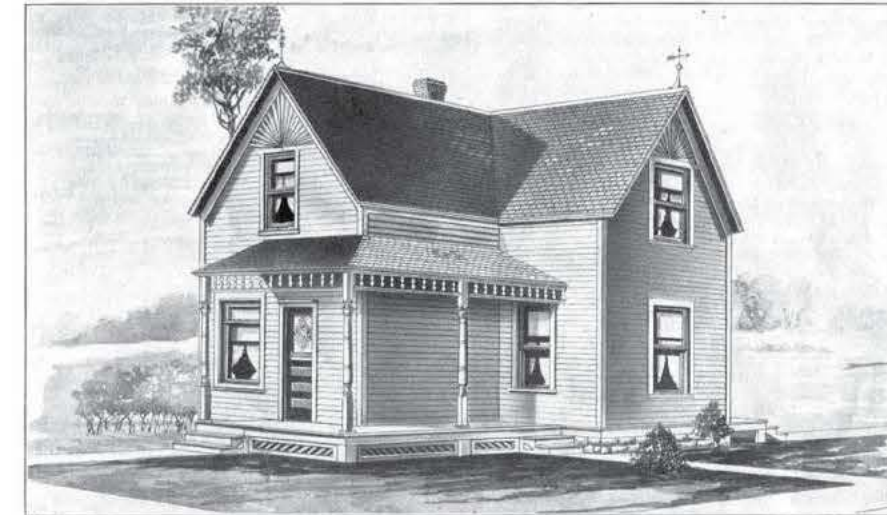
where you've returned to many times, some space that you feel safe in real life that has manifested itself into a setting that your thoughts occupy. Maybe while you dreamt of that spot, you found that your family or loved ones are imagined there with you, contributing more to the sense of comfort that these thoughts bring to you. That setting and all of those that you dream of are a version of home. It's a soothing mental place to return to and collect yourself when you need to detach from the tangible world around you. While all three forms of home that I'm going to discuss are equally important in my opinion, this one is crucial in establishing the foundations for mental health, being that it is the origin point for much of what goes on in our minds. Being able to retreat to your thoughts and occupy this space is a healing act of taking shelter, that we take part in every day and night.

The second scale of our home is the most obvious and tangible version: physical shelter. Like I had initially thought, this is the primary and most often perceived as the most important version of a home. It's the place where we physically occupy for safety and comfort, and often is the place that manifests itself as our oneiric home after years spent returning to it. In the sense that our oneiric home is a replica of this physical place, it's the center of our own perceived universes - we will always return to this spot from what we're doing in our lives, both physically and often mentally. Thinking of our houses in this way reveals that there's something sacred about the home for all of us. That sanctity was historically represented in homes that humans have built, starting out as huts that were physically shaped into focal points for life, with domed roofs made of malleable material that were eventually mimicked in the forms of religious and governmental places of importance, like the Pantheon, the Duomo, or even our nation's capitol building. The house itself became a symbolically sacred place, beginning that literal manifestation of such an idea when Dura Europos, the first house church, was constructed and used to practice faith in what would be modern day Syria. We often call our modern churches the "house of the lord" or "God's house" for this very reason, and they are filled with symbolic ornament that illustrates the culture and values of its occupants. I digress though, I'll return to the topic of sanctity and its importance for architecture and home, but understanding our physical shelter as an important place that grows into our dreams and provides us physical wellbeing is the point I'll get across for now.

The third and final type of home is a sort of linkage that we have between ourselves and the world around us. Not just the geographic place we occupy, but rather the link we share with the people around us, the culture we become a part of, and the earth and nature as our home. This metaphysical link is permanent and ongoing between all of our lives and the lives that took place before and after our own. To offer a simple metaphor to relate this concept to, I'd compare this to the "pale blue dot" phenomenon as I perceive it - When the satellite Voyager 1 reached the boundaries of our solar system in 1990 and turned around to take one last look at the Earth, it took a photo in which the earth is just a tiny, pixel sized, pale blue dot. That little dot is everything for us - home, people, culture, nature, life, and time. All of those things are compressed into one small dot, permanently bound together yet isolated within the greater cosmos.

To flesh out this phenomenon as a sort of home and explain its intricacies, Martin Heidegger coined this concept of everything being one as the Fourfold. His concept consisted of four areas of importance as the idea's name suggests - Earth, Sky, Mortals, & the Divinities.

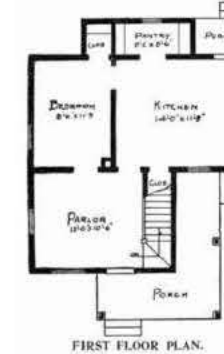
Fig. 076 | Physical shelter | via Sears Catalog Homes



MODERN HOME No. 115

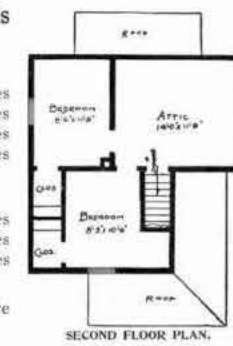
With Wood Foundation, Not Excavated.

On the opposite page we illustrate a few of the materials we specify on this, our \$725.00 house.



The arrangement of this house is as follows:

- FIRST FLOOR.
- Parlor - - - 12 feet by 10 feet 6 inches
 - Bedroom - - 8 feet 6 inches by 11 feet 9 inches
 - Kitchen - - - 14 feet by 11 feet 9 inches
 - Pantry - - - 8 feet 2 inches by 3 feet 6 inches



- SECOND FLOOR.
- Front Bedroom, 8 feet 3 inches by 10 feet 6 inches
 - Rear Bedroom, 8 feet 6 inches by 11 feet 9 inches
 - Large Attic - - 14 feet by 11 feet 9 inches
- All bedrooms have roomy closets.
- Size: Width, 24 feet; length, 28 feet, exclusive of porch

Fig. 077 | The pale blue dot



I'll take the time now to expand on this, as its ideas relate to the other two types of home and tie into all of the other findings I've come across while researching my topic.

Earth is easy to understand. We occupy a place on Earth, and every part of our life is contained within it. Earth also refers to nature and its cycles. Most of us probably find a place that's softened with greenery, full of wildlife, and bursting with natural colors as a setting that reinvigorates and delights us. This ties back to a note from my first presentation, and the idea that a walk through the forest does something transcendental to our state, allowing us to experience Heidegger's Fourfold in one of its purest states. We feel one with the Earth in this setting, and often can directly experience the other three sects of the Fourfold within this setting.

Sky refers to the universe around us, but particularly to the sun and natural cycles of our atmosphere that provide the necessary resources for life to occur on Earth. Without the sun, there would be no life on Earth, and without the rest of the stars in the night sky, we'd have had no way to guide our journeys across the planet as we explored it in search of new homes. We derive information and a sense of place by looking up at the sky, along with analyzing the Earth around us.

Mortals refers to us, as well as wildlife and the greater circle of life that we depend on for our species' survival. We depend on each other to care for our home within the Fourfold, through creating relationships among ourselves and other species, tending to the environment and harvesting resources from it, and caring for other life on the planet that improves the quality of ours.

Divinities refers to gods and higher beings that tie us together and hold power over life in Heidegger's original definition, but given the differences in religion and massive quantity and variation of belief systems, I think it's better summed up as a sort of empathy or metaphysical link that we share. I'm referring to the sort of intangible ropes that tie us all together through culture and compassion for our fellow humans and other life on the planet.

So now I've laid out the three types of home and can ask the question: what constitutes homelessness? I'd argue that losing any one of these three versions would result in that phenomenon, though we accept the idea of lacking shelter much more readily as homelessness than the loss of the other two modes. I'll attempt to counter that idea to establish the reasoning for part of my eventual proposal.

First, the oneiric home. Losing a sense of peace of mind and not having the ability to retreat to thoughts of shelter and comfort is an awful foundation for mental health. It causes a sense of isolation and disconnection from the things in your life that bring joy and fulfillment. If you've ever experienced depression, you might recognize that sort of feeling. You can't derive any happiness from the things you normally would enjoy, and the people around you can't do much to lift you up either. It's a state of wanting to cease existence, and retreat to whatever comfort you can get from being wrapped up in something and letting time roll on, but in doing so you still can't get away from those bad feelings.

So how would that loss of peace of mind be considered homelessness? Well, besides the lack of a truly peaceful mental place that reinvigorates you, it can extend into your tangible life and break apart the relationships you share with the people and world around you. It

makes you feel alien in your pre established relationships and has the chance to hurt them and lead to further removal from the life you live when you're mentally well. In the process of that removal, you lose your home within yourself, and your home among other people.

So now skipping past obvious physical homelessness, I'll argue for losing the Fourfold as a mode of homelessness. This one is a bit more abstract and harder to derive, but bear with me. To start, I don't think it's possible to actually lose all of the Fourfold across the entirety of the Earth, unless there was some catastrophic event like nuclear annihilation or a meteor splitting the planet in two, but typically it's capable of being damaged. When that fourfold is damaged in some way, I think it's valid to question if we are truly at home, or as Heidegger put it: if we're truly dwelling on Earth. I'll use the example of an oil spill as a simple scenario to make this idea clearer, and then use a more broad example that I think is directly applicable to us all, but more subtle at face value.

So let's imagine we're living along a river as a simple community, but there's an oil transfer pipe running through the area, and one day it bursts, polluting the river and land around it. Suddenly, our water source and environment is critically damaged by pollution, and the plants and wildlife in the area are killed off by it. The land and water we depend on has been ruined and we can no longer depend on them either, so we need to either have that rigorously cleaned and removed and then wait for life to return, or uproot ourselves to go live elsewhere. The Earth aspect of the Fourfold is clearly damaged. For the life in the river, and the plants that are covered in oil, the Sky is out of reach and blacked out as well, killing off any Mortal beings that are trapped within the area, and disconnecting the rest of the world from a now damaged and almost impossible to repair environment. There is still land and water, Earth and sky here, but as life flees from it and the sky is blocked out from what's under the oil, this place is no longer home for anything.

Fig. 078 | Oil spill | via Sergipe State Environment Administration



Now let me go into the more subtly noticed, but very real disaster that I think we're all directly being affected by. This has to do with the empathy or metaphysical/spiritual linkage I noted as Heidegger's fourth quality of his Fourfold, and it ties back to the individualism I noted in both my first presentation and briefly at the beginning of this one. To examine this cultural disaster, I'll go back to the French Revolution and reference ideas by Giorgio Agamben put forth in *Homo Sacer*, and an additional summary of these ideas from Alberto Perez-Gomez that help to apply them directly to us today.

When the French Revolution occurred in the last decade of the 18th century, there was a societal shift from viewing divinities and monarchs as absolute powers of control and balance, to viewing every person born as sacred in their own right, possessing the rights to liberty, equality, and fraternity among one another. There's obviously merits to this, and I certainly believe in these values myself, but there's also been a negative cultural shift because of them, and Perez-Gomez recognized that as a reverence for hedonism that we've developed over the last two and a half centuries.

Because we view ourselves and all life as sacred, even though rightfully so, we've largely cast out the idea of divine spirits having control of our lives as a collective society, and instead prefer to assume control over our own lives as much as possible. While this may seem like a good thing to have control, these original values of the French Revolution have manifested themselves as horrors in their most extreme cases. When a few people maximize the extents of these values for their own control, we see liberty extended so far as economic corporatism and the assumption of political power by corporations in capitalistic societies like our own, the worst examples of communism and its own failures reached through the extension of equality in old governments like the Soviet Union, and national socialism and its historic atrocities reached through the extended values of fraternity in the genocide committed by the likes of Hitler's 3rd Reich. In all of these examples, concentration of power over a people, even in so-called democratic societies, led to corruption of the institutions required to govern a people who are all considered equal. Political leaders use their power to line their pockets, and disciplinary bodies like the police monopolize violence, exercising it to protect the state's own corrupted institutions from its people.

At the common individual level, and specifically in America today, the view of self sacredness and pursuit of these values has led to exploitation in our capitalist society. That exploitation of people and resources has detached us from one another in the name of seeking personal comforts, like the ability for me to use my iPhone at the expense of the harsh working conditions that Apple employs overseas, or the fast fashion I can wear to signal my status from similarly exploited people. This detachment ultimately feeds itself as it provides more and more simple pleasure for the end user, and with each new innovation of technology that makes life even easier, we foster a hedonistic, almost nihilist society that provides for a few at the expense of many others.

While a physical lack of resources would prevent us from ever reaching a state where all people indulge in this sort of hedonism, the United States has begun to show signs of this idea's end stages. We use technology and drugs to numb ourselves to life's horrors and hardships as much as we possibly can, and indulge in short pleasures that may have



Fig. 079 | Fast fashion | Munir Uz Zaman via AFP

been wondrous and long lasting sources of joy years before our inundation of media and technological conveniences took place. Even media itself has begun to reflect this change, as long format entertainment is beginning to make way for short format TikToks and Reels that we can consume hundreds of in a short amount of time to rapidly get small hits of dopamine, almost as if it were some sort of drug being used well into a pattern of addiction.

The media we consume controls us and contributes to a cycle of virtue signaling that I think reinforces individualism, and detaches us from each other more than it does to unite us. While I don't discount that many of us do really care about the things we preach online, it's not often that we're very consistent with it to the degree of taking real action. To demonstrate what I mean, think back to any major event in the last several years. It likely gathered wide scale attention and activism for a bit, but it was replaced far too quickly with the next big issue that every news outlet and social media post began talking about. In this rapid cycle, there's very little opportunity for real activism and real results to occur, because we collectively stop caring about something and move on to the next in order to stay with the latest trends as they change week to week.

Michel Houellebecq wrote a story titled *The Possibility of an Island*, that demonstrates the extremes of this type of fast, indulgent society, in which the main character, Daniel, has been cloned for 25 generations within a cult, achieving a sort of pseudo immortality, while the world outside this society has become barbaric through war and destruction. With each generation, the character's self has become more and more tuned into technology and simple pleasures while escaping any hardship or real meaning, until the story's present setting - where almost everyone lives their life out within the confines of a dull box, experiencing all of their desires through a monitor and avoiding any of life's real qualities whatsoever. Eventually, Daniel comes across a love letter that his 1st generation self had written before technology became so consuming, and he leaves his safe, dull box in search of that love and its greater meaning somewhere in the outside world, only to find his demise in the destruction

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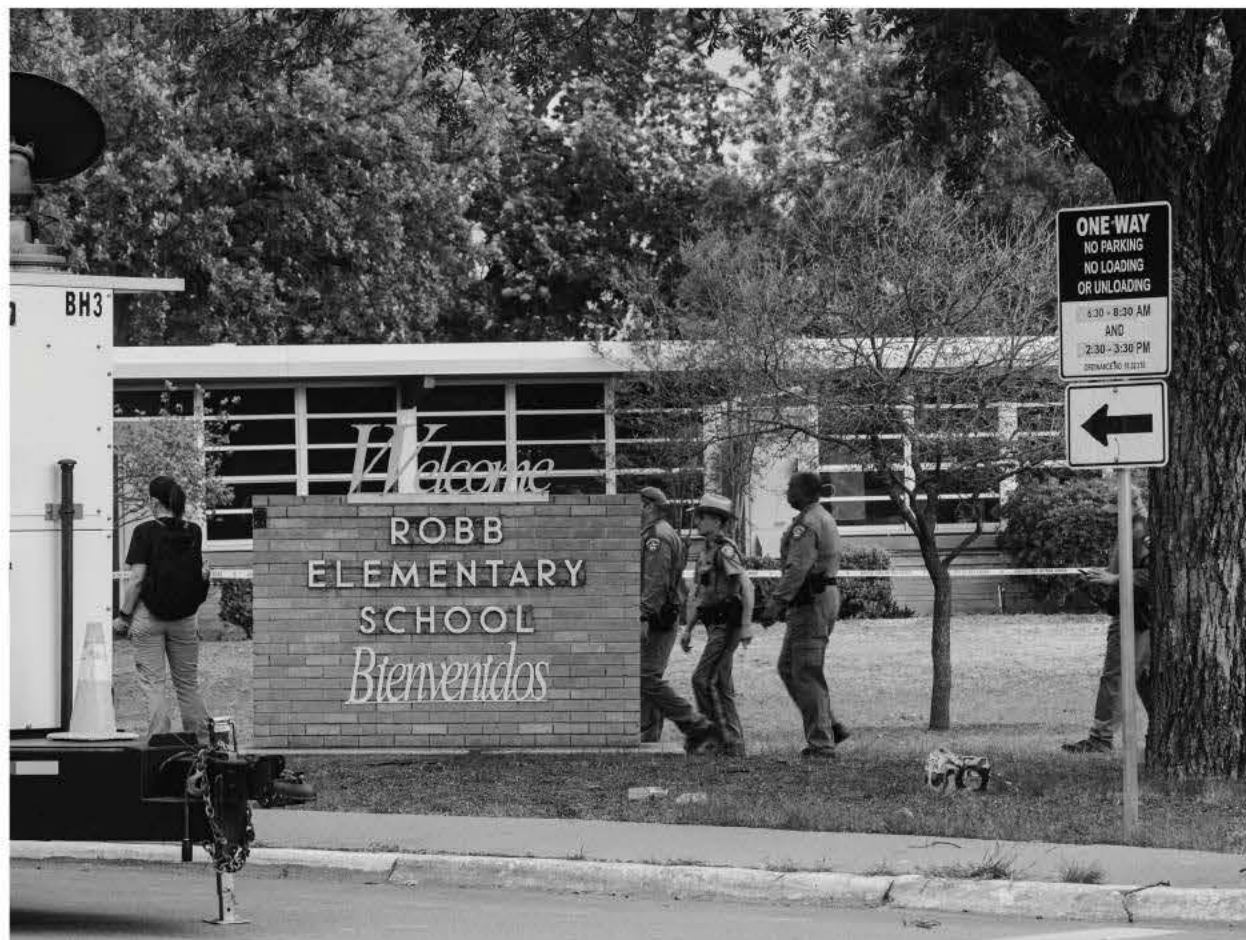


Fig. 080 | Uvalde after tragedy | Christopher Lee via NYT

Michel Houellebecq wrote a story titled *The Possibility of an Island*, that demonstrates the extremes of this type of fast, indulgent society, in which the main character, Daniel, has been cloned for 25 generations within a cult, achieving a sort of pseudo immortality, while

the world outside this society has become barbaric through war and destruction. With each generation, the character's self has become more and more tuned into technology and simple pleasures while escaping any hardship or real meaning, until the story's present setting - where almost everyone lives their life out within the confines of a dull box, experiencing all of their desires through a monitor and avoiding any of life's real qualities whatsoever. Eventually, Daniel comes across a love letter that his 1st generation self had written before technology became so consuming, and he leaves his safe, dull box in search of that love and its greater meaning somewhere in the outside world, only to find his demise in the destruction outside of his confines. This story demonstrates the possibility of the animalization of our own race, when capitalist innovation eventually optimizes a product that can fulfill all of our psychotropic desires, leaving us to consume pleasures within our own small borders of our physical homes, meaninglessly existing detached from one another within the greater Fourfold.

Now obviously we aren't close to a point of cloning ourselves for "infinite" life and living entirely within one spot, tuned into a computer for our whole lives. But I'd argue that we are approaching the early stages of this sort of thing, given how much we live online and have stopped interacting with the real world in order to derive life's pleasures. There's validity to the criticism placed on technology for the way that it's begun to replace real world connections with filtered realities across our news feeds, and I do think that this replacement is damaging our empathic and spiritual connections, violating the natural Fourfold, and spreading us much farther apart metaphysically, despite our nearness to reality within our pale blue dot.

I'll use this cultural phenomenon to finally reel the topic back in, and point out the problem I'm seeking to address with my thesis now.

I'd like you to try and think of beautiful, symbolic architecture that speaks to and connects you to a culture. It's highly likely that something historic appears in your mind, probably created before the French Revolution like in ancient Rome or Greece, having to do with established religion or renaissance art. While I wouldn't argue that culturally symbolic architecture has been eliminated from our profession temporarily, I'd say that we've largely lost our way as architects and tend more to the economic and convenient demands for our projects, while losing the symbolic, oneiric, and culturally relevant functions that architecture can offer. We've even begun to design "smart" buildings that allow us to control every aspect of our environment from a single terminal built into the structure. To quote Perez-Gomez: "Architecture must create appropriate, transformative atmospheres that accommodate habit, as well as bring about productive, poetic, and ethical change". As I pointed out in my first presentation, many developments that we see going up today don't do that last part, and instead just serve to create profit and indulge those who are well off enough to participate in them. To the degree that we're innovating to cater towards hedonism and removing hardships from everyday life, we're condensing the world to a safe indoor space, and beginning to replace our oneiric homes with rapid pleasures derived from our phones and computers, removing the opportunity to explore our own imaginations and physical worlds outside of a digital realm.

Speaking to how I'd like to address these problems today, my initial idea for fighting homelessness was something simple and singular in scope like social housing. While this typology has been shown to have varying levels of success abroad, American culture with its

hedonistic reverence and collective unwillingness to provide for those that we're detached from doesn't seem to be ready to accept this as a solution on its own, and would actually reject it despite the benefits it may bring. A primary example of this is the Pruitt-Igoe housing development from St. Louis, Missouri. The development was criticized for its design after it massively failed and was forced into demolition after only 2 decades, though after looking into it myself, I'd argue that its intent was muddled with political and economic forces out of the project designer's hands, and that those forces were what set it up for failure. It doesn't seem like social housing alone can solve our issues of homelessness unless it were in a vacuum without those negative influences, or reframed within an entirely different societal lens. To compound the problem further, Pruitt Igoe is now cited as a reason to not support social housing, due to its failures. If housing itself can't currently be a solution to homelessness within our societal framework, then how are we supposed to address the issue?

I think we need a cultural reawakening if we're to ever get any closer to addressing the obvious physical homelessness and disparities experienced in our society. If a project aimed at providing for detached and disadvantaged individuals is going to be successful, there needs to be a large collective of people behind it - like I said at the end of my first presentation, if I believe in a community approach to fixing a crisis, that requires those members of the community to believe in the same thing.

So now I redirect my aim of my thesis towards a sort of "cultural rehabilitation" through architecture, by creating a site that offers opportunities to reconnect with one another and to rehouse people, culture, and symbolism away from our social media feeds and the app icons that represent them. Architecture can be used to reinvent symbolism that reinforces the connections to each other, our place in time, history, and our mental and physical environments that I think are necessary for establishing a rejection of hedonism as a virtue, and reestablishing empathic links to the life around each of us.

This symbolism and purposeful creation of space doesn't need to be restricted to ornament and decorative flair. While these mediums for symbolism are valid and have their use, they alone would only give skin deep meaning to a project's purpose, not allowing for any real sanctity to be established. Instead, for instance, think of a cold winter scene, with an ongoing blizzard in the middle of a forest. Now place a small, simple cottage in the center of that scene, with its windows lit by a fire that smokes out of the chimney. That little cottage represents warmth and coziness, and can be a beacon for rest and recovery. Given you celebrate a winter holiday like Christmas that you have fond feelings for, that cottage may even remind you of that time of year and bring you a sense of happiness and nostalgia for watching the storm rage on outside, from inside the warmth and joys of your own home. Just this simple contrast of warm shelter against the cold outside is a powerful symbol in its own form.

That sort of imagery segues into what I'd like to do with my own thesis. I mentioned Pruitt Igoe as a failed example of social housing in the US earlier.

To briefly detail that project a bit more and set the stage for what I'd like to do, Pruitt Igoe was a 33 building social housing complex built over 57 acres in the outer area of St. Louis. While the original design intent was to create a series of diversified height midrises



Fig. 081 | Symbol of serenity

in a modernist style, placed between greenery lined streets and centered around a lush park - governmental influence and budget restrictions forced the buildings to all have uniform heights of 11 stories, cut out almost all of the new plantings and the park that were planned, and made for removals of simple amenities, such as elevators that only went to select floors to reduce stops made, forcing usage of stairwells in the tall buildings. The original towers were going to be racially segregated into the separate Pruitt and Igoe complexes, but following supreme court rulings arising out of the civil rights movement, they became integrative and allowed for residents to live anywhere within them, regardless of race. When the towers first opened in 1954, 40% of all residents were white, but following the phenomenon of white flight after desegregation, the entire occupancy of the complex was black by the 1960's. Within a few years of the project's opening, a large amount of vandalism had begun to occur, with outsiders from the surrounding low rise slums flocking to the 11 story towers where it was easy to commit crimes under the radar. Following a recession in 1958, these problems were exacerbated and, despite financial efforts to uplift the complex from a few different parties, demolition of the project began in 1974 and finished in 1976, marking the "death of modernist architecture".

The original site of those towers still sits mostly empty in St. Louis today. In the 1990's, the site became a demolition landfill and eventually was covered in an overgrown brownscape of trees and brush. A few small buildings from Pruitt Igoe's time remain there, along with a newer middle school and health clinic that have gone up since

the 90's. Surrounding the site are many low income households, with blocks of median incomes less than \$30k, occupied by a majority of black people still to this day.

My goal with my thesis now is to propose a new miniature community on the old site of Pruitt Igoe that not only offers reassessed and improved social housing, but also works as a center for the sort of "cultural rehabilitation" I mentioned earlier, in order to garner the communal support that the housing typology would require. Additionally, my approach aims to rehouse a community within their own oneiric and the Fourfold's empathic framework. My intention is to create a sort of habitable oasis within a historically left behind, destitute location, that can become a sacred place for a community. I want to develop the opportunity to create a new oneiric utopia and reinvigorated culture for the community's occupants using architecture to frame an atmosphere that uplifts and connects. I anticipate the main challenge of this design will be discovering how to meaningfully reframe culture and values like hedonism versus empathy and hardship through an architectural perspective, even in this small case study, but also aiming for the uplifting of a community and the area around it walks a fine line near gentrification that I don't want to cross. My work would be entirely meaningless if it's overshadowed by a sort of reverse white flight phenomenon that would drive out the area's long term population due to costs from overambitious design that only serves those who are already well off.

Despite the historic failures of social housing in the very same place, I'm holding my position on creating this typology as a tool to address homelessness, as I believe the only direct solution to any form of physical homelessness is to offer homes within those individuals' means. This sort of housing can also lend to battling against gentrification, given the living costs paid by more affluent occupants is directly used to subsidize those in need of support, curbing any financial motives for exploitation of the residents' rent. In addition to physical housing though, I also intend to create a center for the reframing of values and metaphysical reconnection necessary for the success of the housing aspect. This portion of the project could take on the typology of a library, community center, theater, place of worship, or even a school of sorts. A well thought out and meaningfully created center for the reframing of this project's proposed values could be the key to enabling the success of rehabilitating the culture of this miniature society to allow for the greater success of the project as a whole, despite its lack of financial motives or personal gain from any sort of project oversight. In doing so, rather than telling the story of the possibility of an island, I hope to be able to tell the story of **the possibility of a collective.**

LESSONS OF A DREAM

KARSTEN HARRIES

This excerpt from Pérez-Gómez's Chora 2: Intervals in the Philosophy of Architecture, expands on the topics raised by Martin Heidegger in his Building, Dwelling, Thinking Essay. Harries starts with the topics of dwelling and building, and reminds us that we are only capable of building when we are capable of dwelling.

To build in the Heideggerian is to raise structures into places by joining their spaces. We must understand space as the realm for places or regions, that we continuously define within and amongst one another. When we understand space in this way, we unravel a series of regions that we occupy from our home, to our city, then countries, all the way out until we reach the Earth, which ultimately hosts us in the Fourfold.

Harries then moves to analyze our relationship with divinities further, redefining the divinities as the context and circumstances we experience, as well as how we treat one another from human to human. He then asserts that dwelling in the Heideggerian sense constitutes facing the divinities as inescapable in the sense that no human being could be the sole author of their life. While we as mortals are each significant in our temporality, we've collectively begun to threaten the Fourfold through our inability to commit ourselves to something greater than the individual.

This analysis hints towards the necessity for the creation of buildings that allow us to experience our essential incompleteness as singular beings. Architecture that can bring forth the Fourfold must provide the opportunity for interpretation of our place in an ongoing historical context, as well as open our eyes to the necessity for our coexistence.

INSIDE THE ENDLESS HOUSE

FREDERICK KIESLER

This book compiles a series of Kiesler's diaries over the course of a couple decades, and reveals through his lived experiences a sort of correlation that he spent his life trying to realize through his Endless House project. Ultimately, the entries compiled together and contextualized frame a new sort of science coined as correalism. This sort of perspective on existence "embraces man and his environment as a global system of reciprocal relationships". In a correalist world, picture, architecture, sculpture, and color become one without losing any integrity on their own. The ultimate goal of this sort of design would be to construct constellations meaningful to each of us, that are imbued with tension directing us endlessly throughout it.

RESEARCH PRESENTATION 3

PRESENTED DIGITALLY IN VIDEO FORMAT,

NOVEMBER 27, 2022



LIFE A USER'S MANUAL

GEORGES PEREC, PREAMBLE BY PAUL KLEE

This novel describes the little details of dozens of lives lived within apartment units, in a unique way that makes each of them a single part of a whole. To introduce the text, Paul Klee's preamble examines the essence of jigsaw puzzles and the role of the puzzle maker. This widened perspective on multiple lives coexisting reveals that there is an intangible connection between people's lives that is reflected between one another.

Jigsaw puzzles, and puzzles in general, are interesting in that each part of the whole does not precede its existence. The parts do not even determine the pattern of the puzzle, but rather the pattern is what determines each of the parts' identity. These individual parts and their identities however do not paint a clear picture on their own. Instead, the full picture is only clear when all of the parts are joined together - something fascinating about this joining though is the dissolution of the original parts' identities. Once joined together, multiple parts become a singular unit that represents a clear, undivided part of an image, and when all of these parts join into units and then finally into one whole, their identities are one and there are no questions about what their collective representation is.

Klee asks us then, if all of these parts are to eventually come together then what is the role of the puzzle maker? This is to be determined. Their most basic function is to cut apart the whole image to be reassembled, but in doing so they do not leave any chance to the reassembly of the image. Every outcome during the process must be predetermined, and entirely calculated by the puzzle maker before those moves can ever be made.

The jigsaw puzzle serves as a metaphor for the society we live in. Each of us is an individual part of a whole puzzle, and while our singular identities could be broken down and analyzed to the most minute details, that could never on its own reveal why we are the way we are and exactly how we fit into the rest of the puzzle. Differing from regular puzzle pieces though, when we are linked together and fully understood within a context of the parts that we're surrounded by, it reveals more about our identities, and makes both the entire picture that multiple parts paint as well as the individual parts themselves clearer.

Who then would be the "puzzle maker" for this assembly of society? Klee doesn't answer nor even ask such a question, but I think this

is a crucial question before one would ask what their role is in creating the assembled “puzzle” that is society. I’d make the claim that given the impact each of us has on one another, we are all puzzle makers, but perhaps some of us in positions of power would be makers with more power over the patterns that we’re determined by.

ENDLESS INNOVATIONS: FREDERICK KIESLER’S THEORY & SCENIC DESIGN

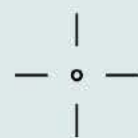
UMI RESEARCH PRESS

In the introduction to the section on “Correalism and Corollaries”, the author highlights some of the core tenets to Frederick Kiesler’s ideas on the way that humans exist amongst their environments. He famously stated repeatedly that “we the inheritors of chaos must be the architects of a new unity,” referring to the role of designers and how they tend to our built environment. Most importantly, this short introduction concisely clarifies the definition of correalism in our profession as the quality experienced when environmental design “satisfies man’s basic need for being in union with the cosmos”. Kiesler believes that this can be done through a radical rethinking of art, theater, and philosophy as we depart from the 20th century and enter a post industrial, information age.

HOUSE POEMS

JOHN HEJDUK

In this short poem, architect John Hejduk uses metaphor to repeatedly carry and re-express the notion of a house through different mediums, places, and scenarios. His poetic use of metaphor to connect the house and so many other things forces the audience to think hard about what a “house” really is and where its boundaries end. This sort of poetic expression seems effective in opening up the ability to explore connotations and find the totality of a “house’s” essence.



DDES

SIGN



THE ARTEFACT

Fig. 079 | The American dream | via Getty Images

When I state that the United States is experiencing a housing crisis, we undoubtedly all agree, and likely think of the skyrocketing prices, or scarcities of housing supply depending on where we are. Inflated prices, interest rates, and scarcities have all made housing relatively unattainable, and have led to severe economic consequences for millions of Americans, to the degree of making housing so out of reach that half a million Americans will experience homelessness for some duration every year. Surely there are problems here with this industry, and the obvious ones are the reasons I stated for the crisis that we can all agree on in the first place. What's more critical and closer to the root of the problem though, is something that I believe stems from the culture we've generated in the western world over the last two centuries, leading us to become disconnected from each other, and from the places that we call home.

During the French Revolution, there was a significant shift in the collective hierarchy of values to uplift liberty, equality, and fraternity as inalienable rights for every living person. Rather than viewing a monarch as a divine idol who is holier than thou, we now hold some version of the belief that each and every one of us are sacred beings in our own right. I'm sure that all of us agree on this, and believe ourselves to be special at least to some degree.

Along with this shift in rights for every person though, their reordering following the fall of monarchies has come with additional values birthed from the general perception of what those rights mean for us. **The "American Dream" has typically been for an individual to attain enough capital to buy property where they can raise a family, and then allow their capital investments to grow and make more money for them, to support a comfortable life in their elder years.** This cycle is pleasant sounding at face value - who wouldn't want to live easy and be able to retire after supporting your family? Given our society's capitalist framework though, the dream is rooted in hedonism and individualism. While it worked out in the last century or so for millions of people as our country's economy was steadily growing, new generations are unable to get in on it as the cost of living inflates exponentially beyond what their wages can support.

While the economy grew dramatically over time, our culture continued

to also diversify, shift, and eventually dull itself in this country. Many of the collective rituals, worships, and celebrations of different cultures from immigrating families were lost as the American identity began to take shape from generation to generation and define the way most Americans see the world. In place of the defining features of the diverse cultures that were lost, we've come to value retail and material possessions as signs of class, identity, and worth for ourselves. Paired perfectly with a general appreciation for hedonist and individualist perspectives, and our society has become a capitalist's haven that values a free market so much so, that many would happily reduce their identity to a consumer for the corporations and brands they identify with in order to become part of a social group of other consumers. We all believe in achieving some version of the American Dream through consumption so much so that we've become willingly blind to our own exploitation by the corporations who cater to us. Rather than the working class man recognizing himself as such, and standing up against his bosses in defense of his own rights to the capital value he creates with his labor, the typical American working class man sees himself as a millionaire who's just temporarily down on



Fig. 082 | The American dream | Getty Images

his luck. In his eyes, he would be a class traitor to go after his bosses' inflated salaries for his own better wages or working rights. This trend of culture has allowed members higher up in our society to privatize necessary industries like healthcare and shelter for their gain, almost entirely at the greater public's expense. The housing that we're left with as a product of this privatized industry is often meant to be used as an investment vehicle and lacks any real humanistic value. Our beliefs, relationships to one another, and ways of life are hardly represented or reinforced through the places we occupy.



Fig. 083 | Rentals behind locked gates | airbnb

There have been plenty of people throughout the world in the past who have recognized this as a problem, and knew that the public sector is capable of doing a better job to provide and treat people as citizens, rather than consumers. There are successful efforts internationally by public bodies to create beautiful, healthy communities that are based around social housing, but just that term will often create an image of "commie blocks" in the imaginations of many Americans. Efforts by the United States' public sector to enter and control parts of the housing market have historically been failures hamstrung by myriads of issues, and the general attitude against such public projects was amplified during the era of the Cold War and the red scare. One of the most dramatic and well known failures of housing by the public sector is Pruitt-Igoe, the site I intend on developing my architectural thesis at.

There's been hundreds of different reports and reasons given for be

Pruitt-Igoe's failure; the modernist architecture was too hostile, the government didn't do a good job with it, the people there were somehow morally void, anything to dismiss the project and discredit it. Thousands of stories from thousands of people have been told in individual efforts to define the lifetime of the project, but like a jigsaw puzzle, each individual fragment can only tell a single part of the story.

If the stories are each a single piece of a larger puzzle though, this implies that there was a puzzle maker to begin with. An entity that defined the way that these pieces could be reassembled, who cut the lines between parts of the full picture in order to create deceit and mask the full story from whomever would try to put the pieces back together. We might recognize the architects, housing authority, government, journalists, and even the general public as the combined body who contributed to shaping these pieces.

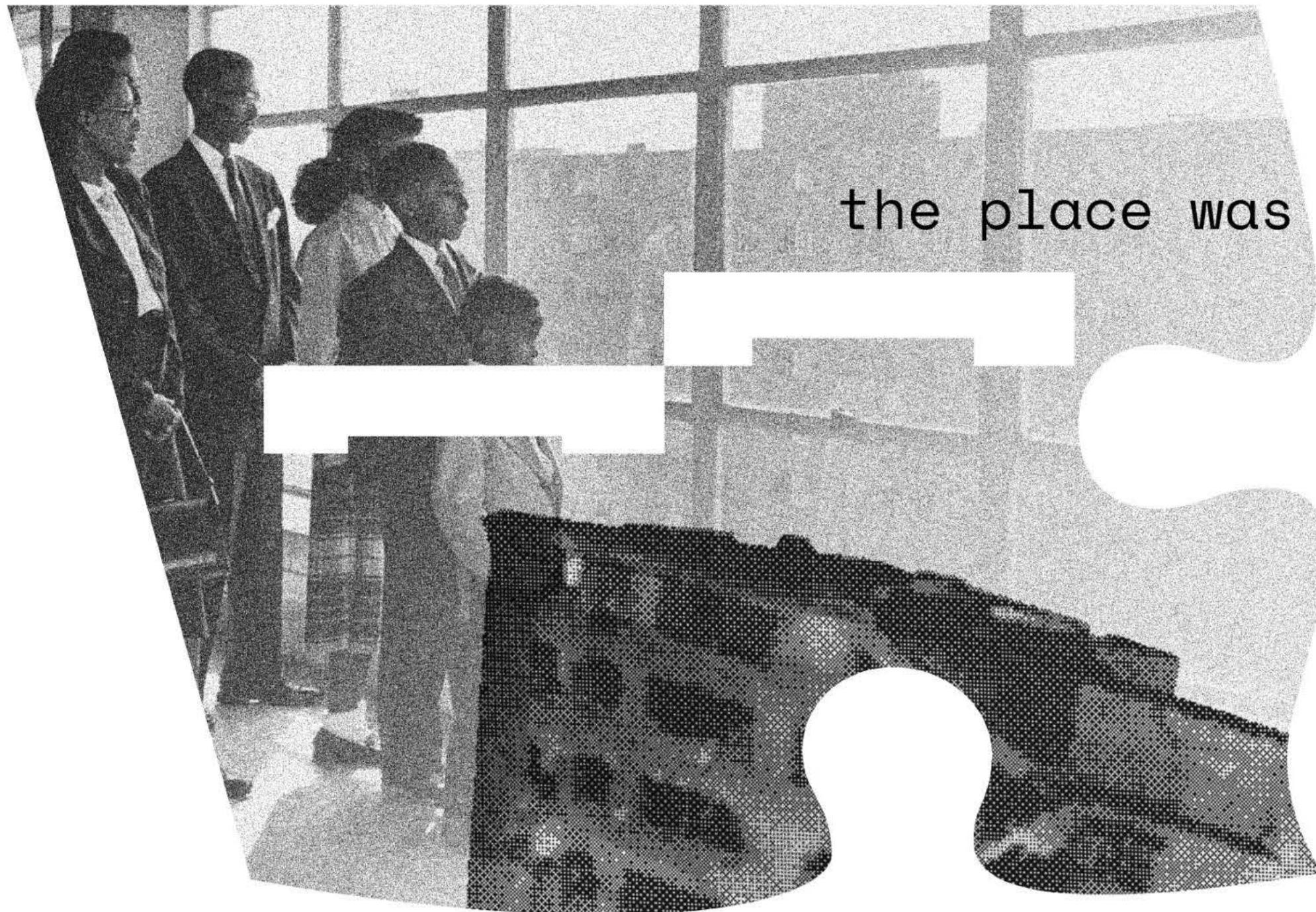
Inevitably, when the individual pieces come together, their borders are dissolved and the full picture is presented as one. A total understanding can't be made of a puzzle until it's entirely complete, so I aim to do that with Pruitt-Igoe through assembling the individual stories from real people whose lived experience at the housing project illustrate it in its entirety. By assembling these fragments, we should be able to understand Pruitt-Igoe for its successes and failures, and derive lessons from it to take forward. I'll start with an account from a resident who lived in the Wendell Pruitt towers from the day they opened until they're demolition two decades later, Ruby Russell.

RUBY RUSSELL

RESIDENT AT PRUITT-IGOE FROM
1954 UNTIL ITS DEMOLITION

"I remember living up in the slums until I was 18, and seeing an application for a new public housing project at the Wendell Pruitt apartments. I was so excited when I qualified and was approved to move into my own place - no one had ever been there for me, I would be the first! The apartment building was so new and shiny, they even had those padded sheets over the walls in the elevator to keep it pristine. That was the first time I had ever gotten to live in a new place, and even better, they put me up on the 11th floor! I'd never been higher than the 2nd previously - I had views better than the most expensive places in all of St. Louis. **I called it my poor man's penthouse. The place was beautiful. I never wanted to leave.**"





the place was

Fig. 084 | Jigsaw piece #1

BETTY L. THOMPSON FORMER U.S. REPRESENTATIVE

RESIDENT AT PRUITT-IGOE FROM
1954 UNTIL 1968

"I remember living up in the slums until I was 18, and seeing an application for a new public housing project at the Wendell Pruitt
"Living in Pruitt-Igoe, it was really like being in a whole town or community together. We lived on the 4th floor, so there were people below us, and above us, and on both sides there were neighbors, we were all so close to each other. I remember seeing kids playing in the breezeways, runnin' up and down the steps and in the parks, or putting on plays and talent shows together at the community center. It was really nice. **You know, there was a real sense of togetherness, we were never alone.**"



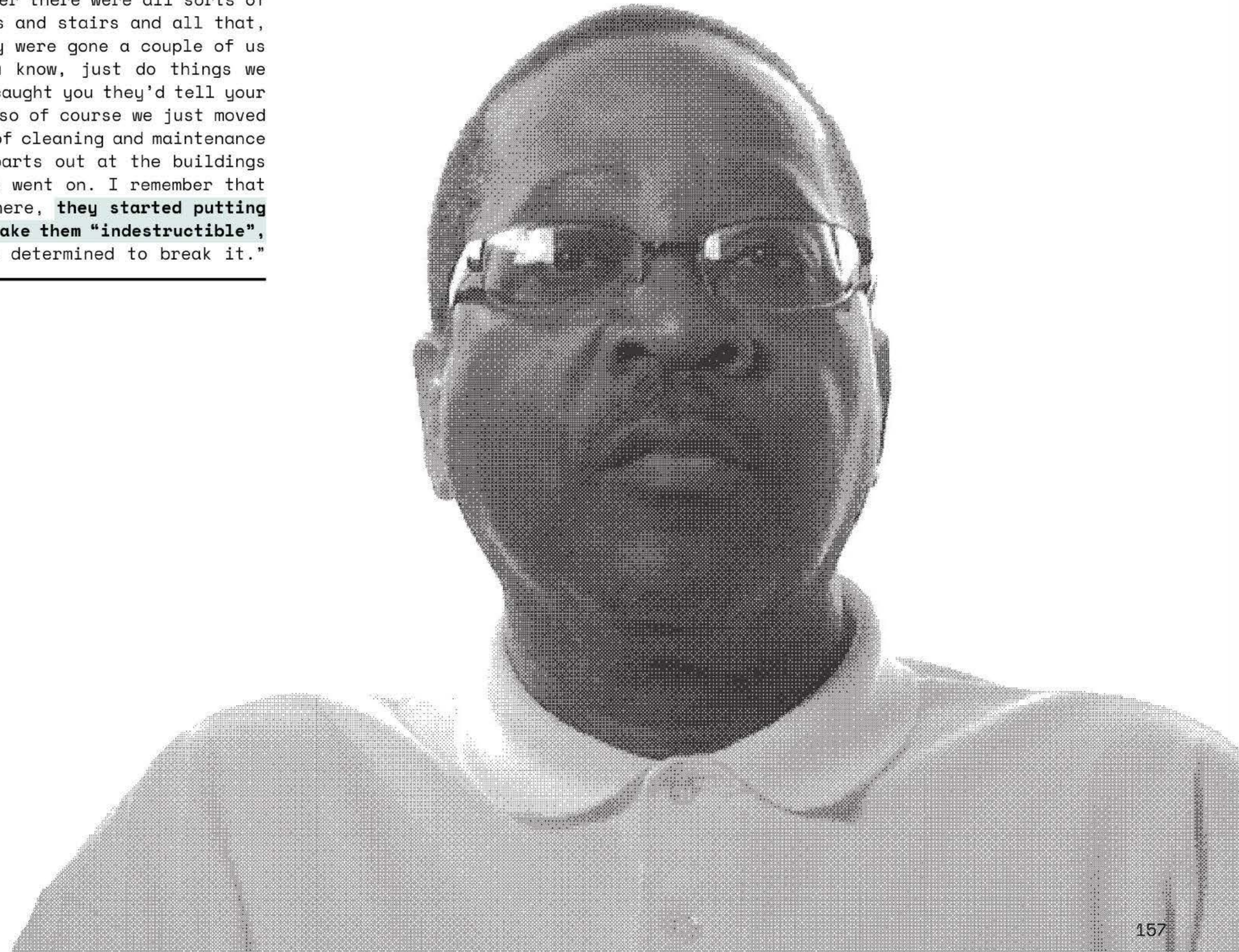
beautiful.

there was a real sense
of togetherness.

FREDDIE STEVENS, ED. D

RESIDENT AT PRUITT-IGOE FROM
1956 UNTIL 1964

"I remember "There was so much opportunity to play hard at Pruitt-Igoe. When I was a kid in the 50's, I remember there were all sorts of janitors in uniforms who would mop the halls and stairs and all that, and we would learn their schedule. When they were gone a couple of us would get together and play wall ball, you know, just do things we weren't really supposed to do. If a janitor caught you they'd tell your parents or take your ball, but we were kids so of course we just moved on and kept playing. At first there was a lot of cleaning and maintenance that would go on, but they sorta switched parts out at the buildings to make the place seem more durable as time went on. I remember that a bit later on in the time that we lived there, **they started putting grates over lights and windows and stuff to make them "indestructible"**, but really that would just make a kid more determined to break it."



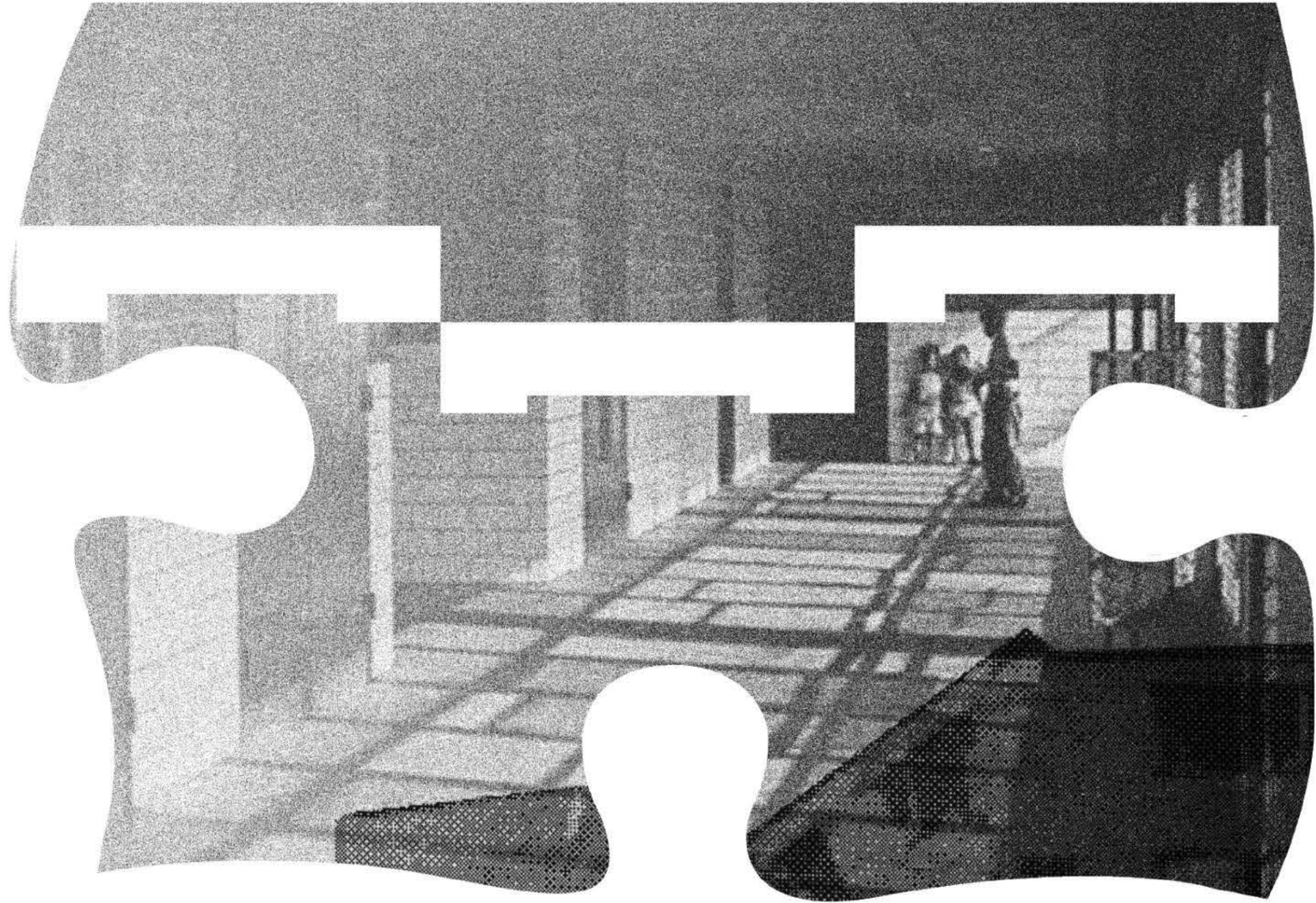


Fig. 086 | Jigsaw piece #3

JACQUELYN WILLIAMS

RESIDENT AT PRUITT-IGOE FROM
1954 UNTIL 1968

“When we moved from the slums to Pruitt, we were moving into so much more space. We had 12 of us in my family, and our old house had 3 rooms. My momma would pull out a rollaway bed in the kitchen to sleep on next to the potbelly stove. At Pruitt and Igoe, we all had our own beds and it was so wonderful. Momma even got her own bedroom door! **We had to live as a group of 11 though** - the housing authority stated that to qualify to live in public housing, there couldn't be an able bodied man living in the household, whether or not he had a job. **My daddy had to move across the river out of the state, and could only come visit us at night if we were gonna move out of the slums,** but if someone ever came asking about him we'd have to tell them that we hadn't seen our daddy in years. Sometimes people would come at night asking for him and he'd have to hide somewhere in our home while we lied and shooed them away as best we could.”





whole complex was
well-kept and cared for.

Fig. 087 | Jigsaw piece #4

BILLIE TENEAU

RESIDENT AT PRUITT-IGOE FROM
1954 UNTIL 1957

I used to love peering out my window and looking out over Pruitt-Igoe and the rest of St. Louis in the distance before I'd go to bed when I lived here, I thought that view was so pretty and I was the luckiest person to have it. **The whole complex was well kept and cared for** in the first couple of years. There was staff who would come and fix anything that went wrong pretty quickly whenever it happened, and I used to always see men out in the lawns mowing and cleaning up outside. We had some security patrols at night too for a while I think. I don't think I saw any of those people any longer than a year or so though. I guess according to the government, the Fed's money couldn't be used to pay for any of the upkeep of public housing, only creating it. As long as we paid our rent, then our place stayed clean and in working order, or at least that was how it was supposed to go. I remember the level of community that I'd see buzzing down in the lawns between the buildings and at our community center seemed to die down pretty quick after we first moved in. Lots of white families moved out to the suburbs that were popping up west of town when segregation ended in the 50's. The jobs seemed to go with them too, I mean you had guys all over town getting laid off and not finding work for months, with no way to feed their families. Some of the towers started emptying out entirely within a couple years after they all opened up, so they just closed them down to stop having to spend anything on their upkeep I guess.



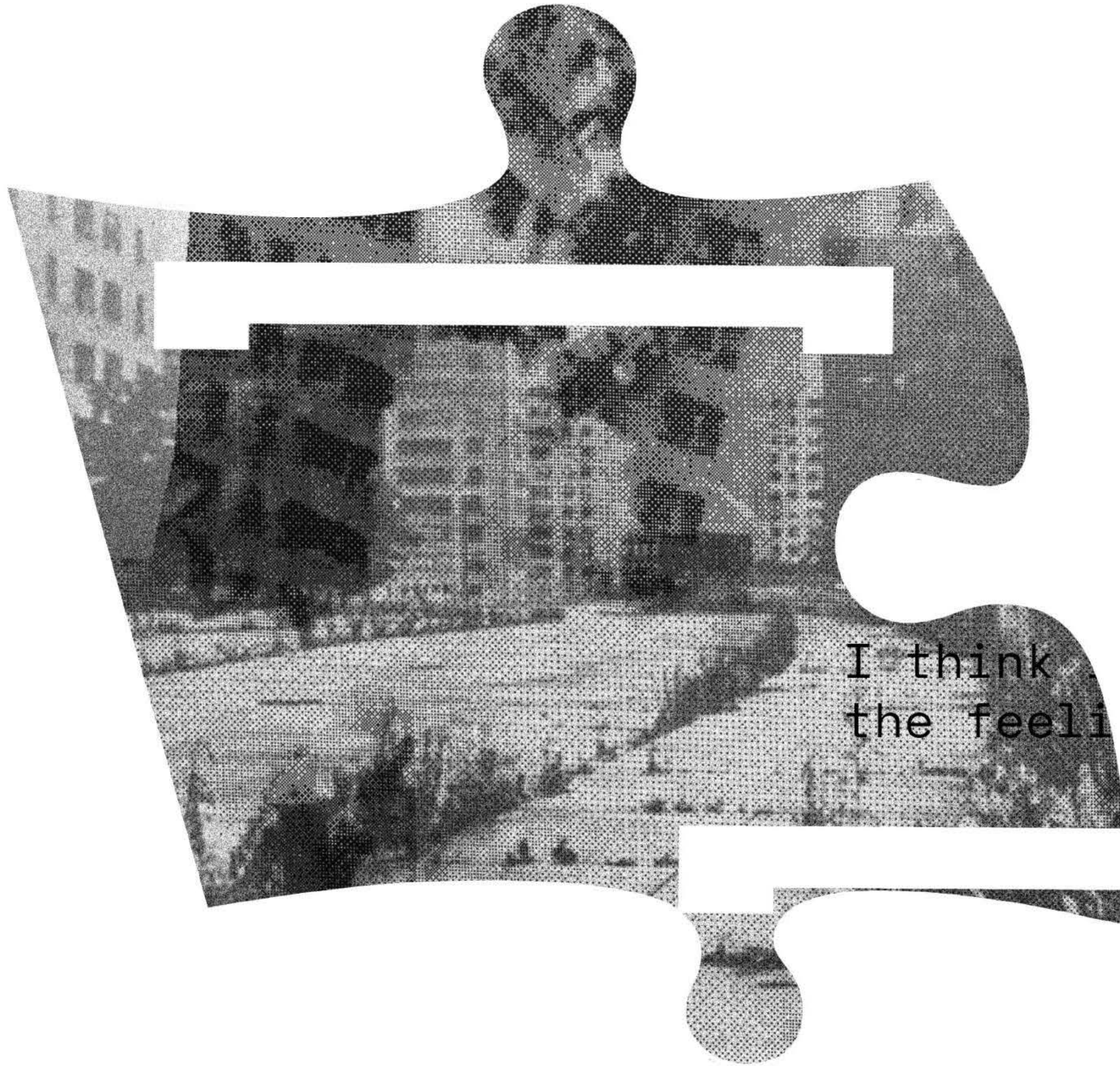
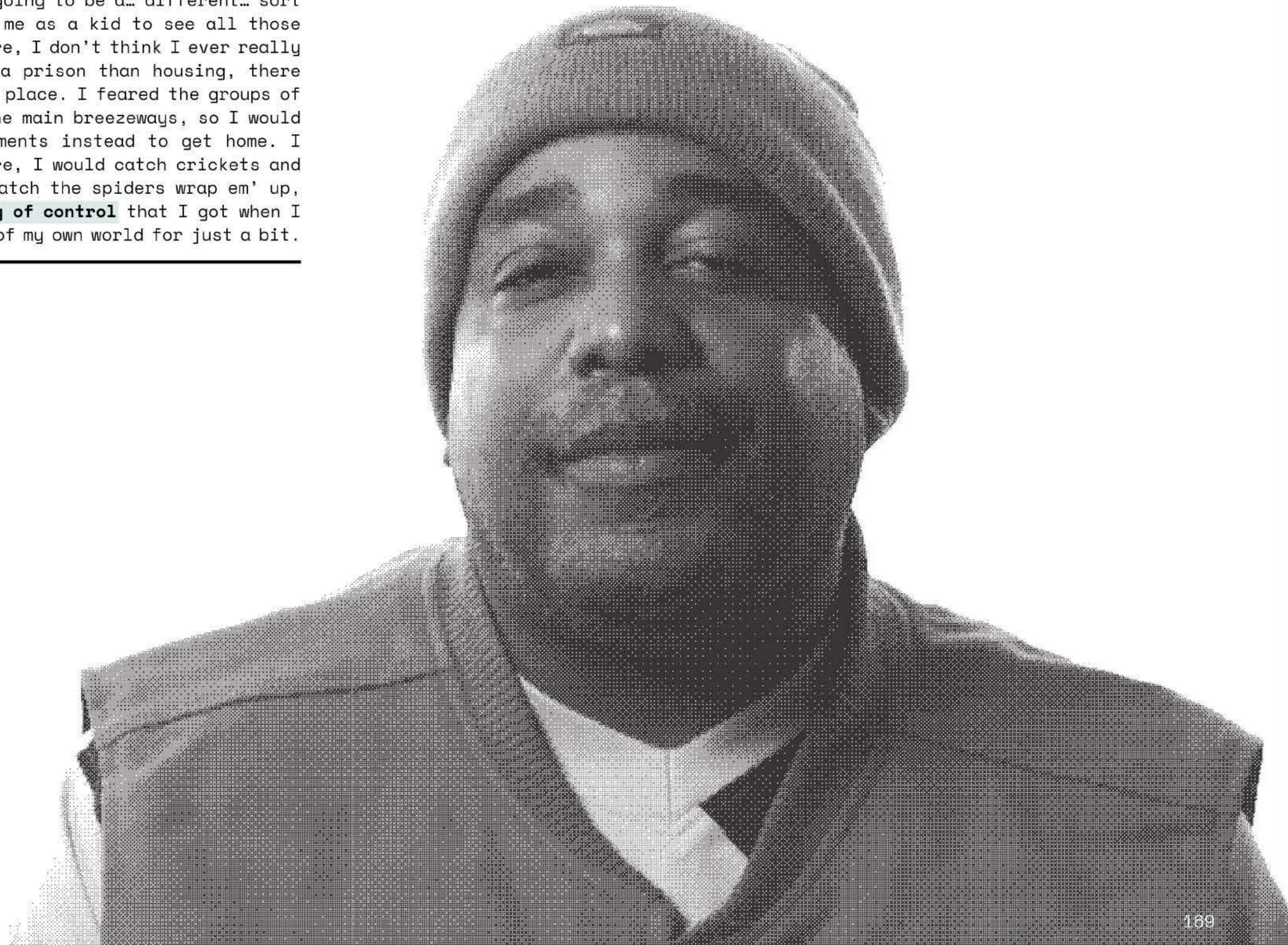


Fig. 088 | Jigsaw piece #5

BRIAN KING

RESIDENT AT PRUITT-IGOE FROM
1967 UNTIL 1971

I was 9 when I first moved to Pruitt Igoe. I remember getting out the moving van and smelling the trash that was piling up outside of the incinerator... I immediately knew this was going to be a... different... sort of living arrangement. It was a shock to me as a kid to see all those tall buildings and the people who were there, I don't think I ever really got past it. The projects felt more like a prison than housing, there was just a sense of despair all around the place. I feared the groups of boys who I didn't know that hung around the main breezeways, so I would walk out in the fields west of the apartments instead to get home. I started to like playing with bugs out there, I would catch crickets and beetles and put them in spider webs and watch the spiders wrap em' up, you know. I think **I liked the... the feeling of control** that I got when I did that. Like I was able to be the master of my own world for just a bit.



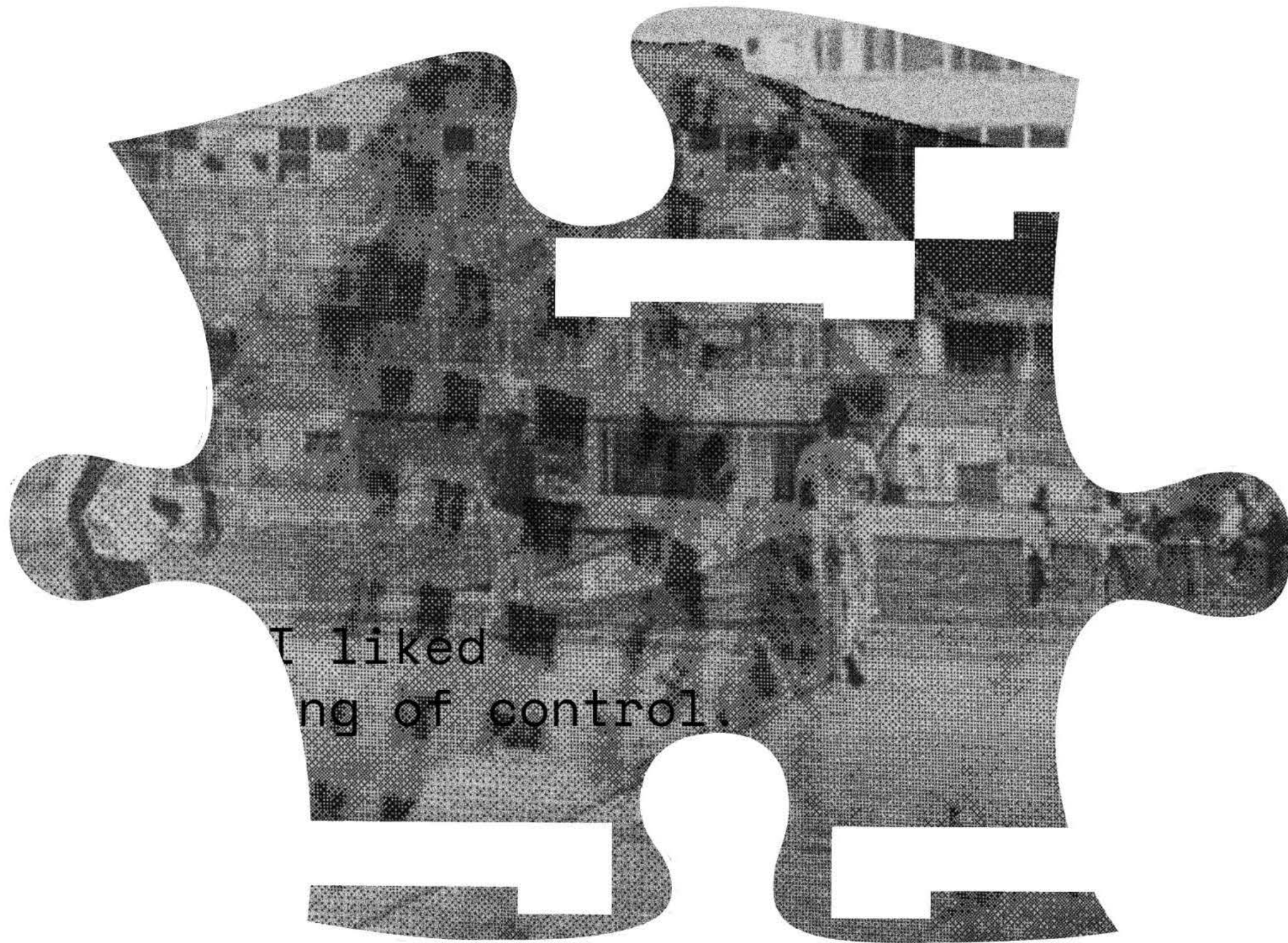


Fig. 089 | Jigsaw piece #6

JOYCE LADNER

SOCIOLOGIST STUDYING WOMEN AT
PRUITT-IGOE DURING THE 1960'S

I visited Pruitt-Igoe as a sociologist when I was 20 just after I graduated college, to study women and girls in social housing. When I was there I met girls who were similar in age to me, and couldn't help but see myself in them despite them being in such vastly different situations to me. It made me wonder what might have happened if my father had migrated our family north to Missouri from Mississippi. The tight knit communities that I grew up in had been disintegrated around these people, and **they were all left helpless on their own. The welfare system treated them like prisoners, and their restrictions seemed punitive.** Residents weren't allowed to even have telephones or televisions, and the residents were often the ones who had to clean and repair things themselves when maintenance wouldn't come. Mothers had to preach self-sufficiency to their children, so often you'd see the boys trying to be men and getting caught up in tussles, jockeying for social position over each other. You never wanted to be at the bottom when no one else had your back.



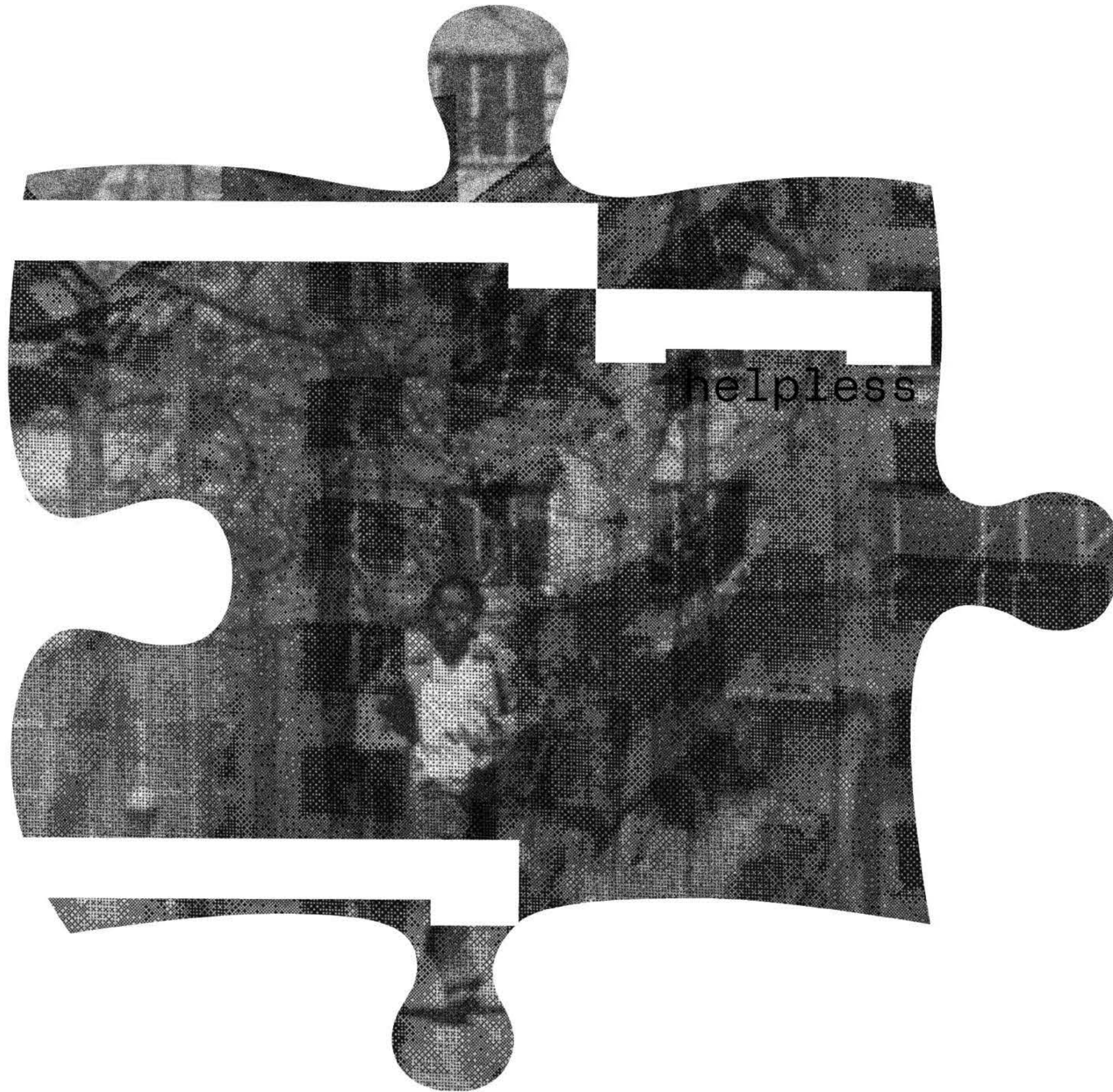
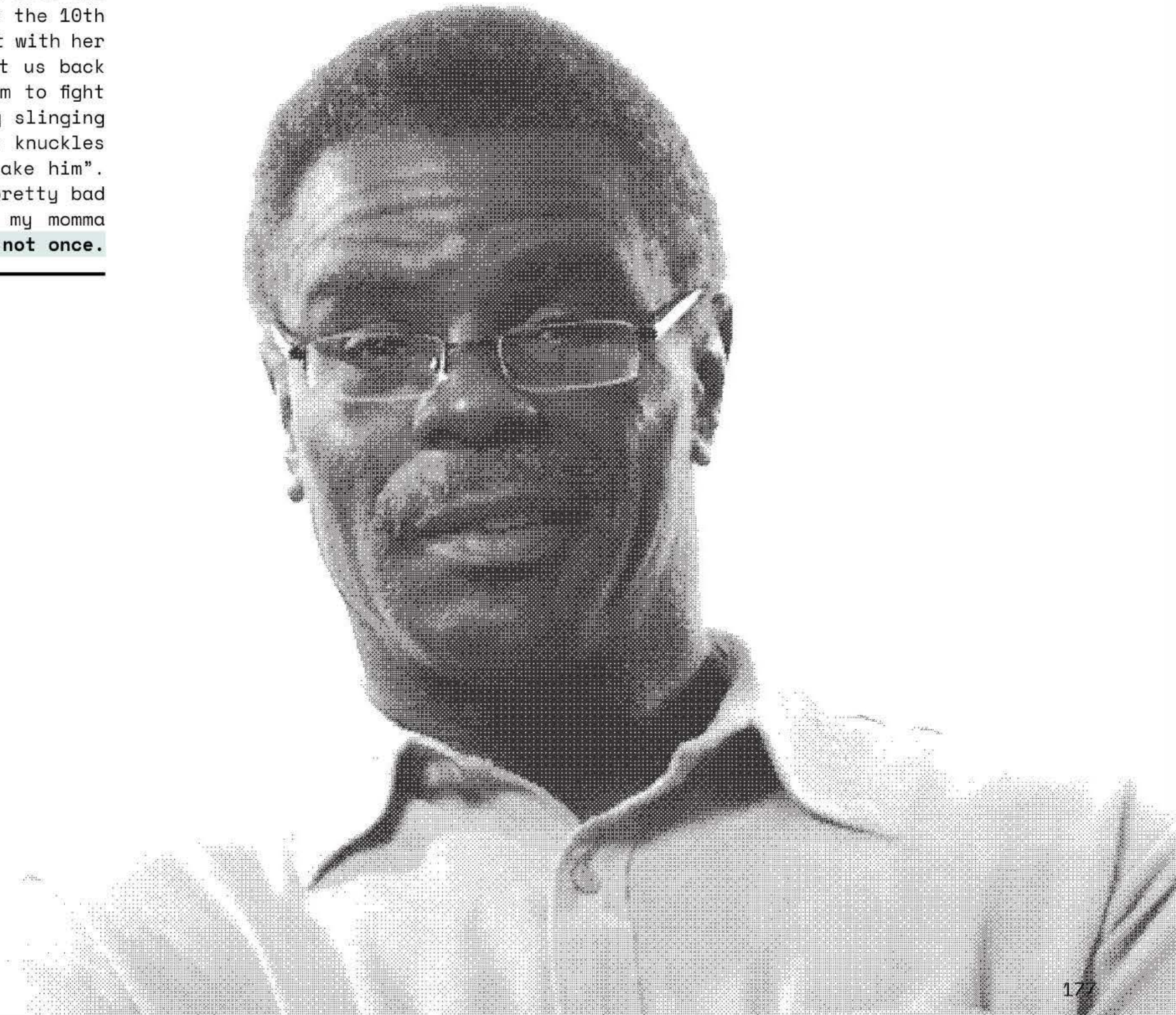


Fig. 090 | Jigsaw piece #7

SYLVESTER BROWN

LIVED AT PRUITT-IGOE FROM
1964 UNTIL 1968

remember one day my momma sent my brother and I with a couple dollars to go buy groceries. We went down the elevator and came out the front of the building where a group of boys jumped my brother and took the cash my mother had given us. She must have been watching out the 10th floor window 'cause when we got back, she was stompin' her foot with her arms folded at us. She grabbed my brother and I and brought us back down there, got the boy that jumped my brother, and told him to fight him. **It was a really nasty brawl**, like these two were really slinging at each other now. The boy's friend grabbed a pair of brass knuckles to jump in and my mother looked to me and said "You. You take him". It was a bloody brawl, I mean we all got our faces cut up pretty bad and a good bruising, but that was the first and only time my momma told us to ever fight. **I haven't fought since then actually, not once.**





all left
on their own.

and
still

Fig. 091 | Jigsaw piece #8

ROBBIE MONTGOMERY

LIVED AT PRUITT-IGOE FROM
1954 UNTIL 1961

When Pruitt and Igoe started emptying out and they closed some of the towers, all sorts of bad folk started taking up camp in them. There were dealers, drug addicts, pimps, prostitutes, you name it... They would make their base up on the top floor where you could see any police coming from miles away, so there was no way you could ever get the jump on these guys to remove them. There were whole drug empires ran outta those abandoned buildings! Without security at night you couldn't be alone, or you sort of had to have an aura of "Don't cross me, or I'll hurt you", or else you were gonna get caught up by someone else. I think the newspapers and media back then made it so that **there was a stigma of danger attached to the name "Pruitt-Igoe"**, but honestly it was partially true. You know, you'd flinch out in the slums when you'd hear car's backfiring or fireworks, but at Pruitt and Igoe we kinda just started to look around when we heard 'em, figure out what was going on...





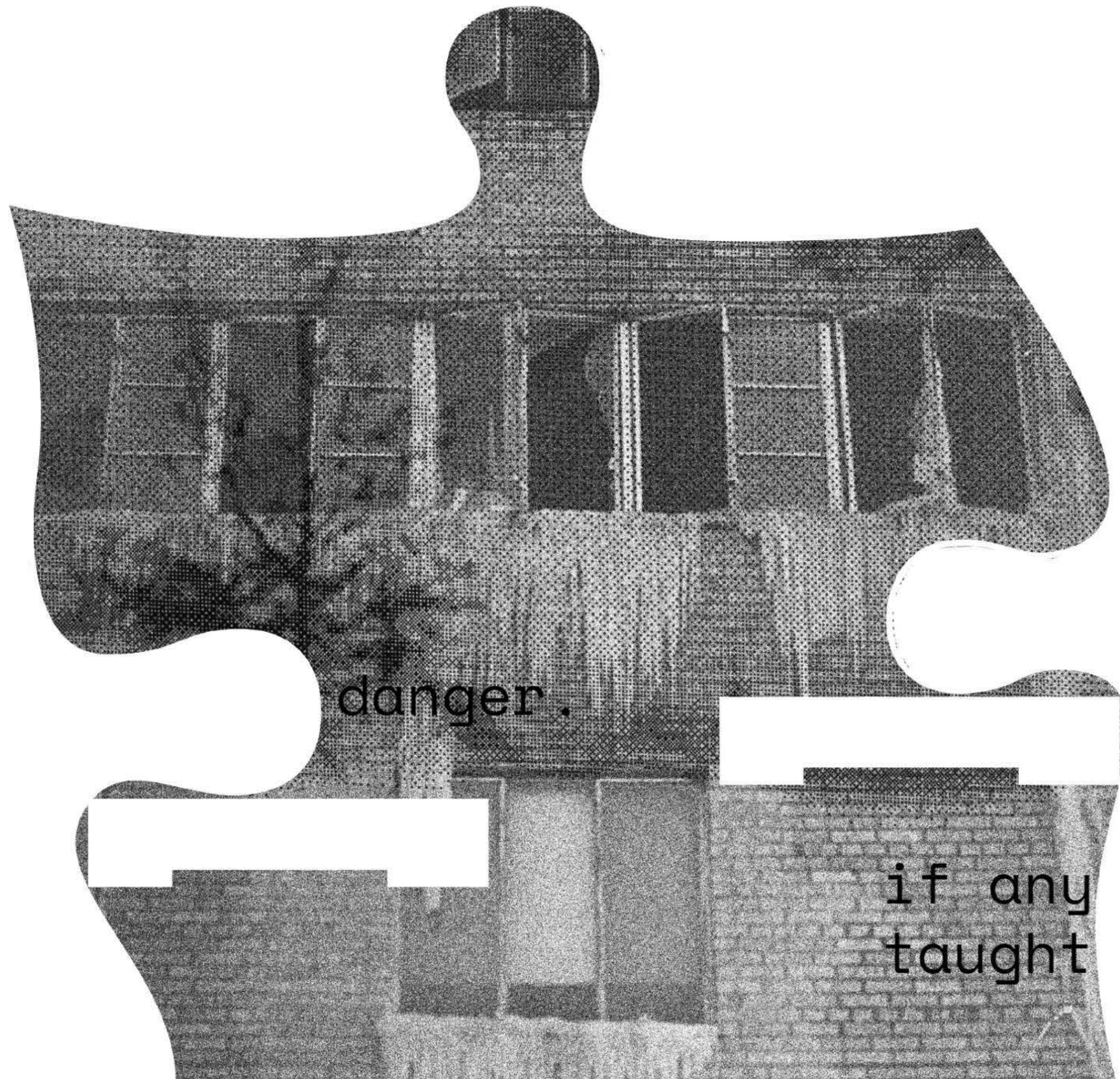
Fig. 092 | Jigsaw piece #9

VALERIE SILLS

LIVED AT PRUITT-IGOE FROM
1964 UNTIL 1968

After I finished school, I became a police officer and had the opportunity for a while to serve in the area where I grew up; at Pruitt-Igoe. We would get calls for drug busts, robberies, all sorts of things, there were some big criminal gangs running out of there, but we weren't welcome in. We were trying to get bad people outta there who didn't belong, but to those residents, I was a part of the system that left them to rot, and they were angry. They'd let us know it, too. Trash and bottles would be thrown at us from windows up above, sometimes they'd even throw firebombs at our cars! They didn't rationalize that there was someone in trouble, or that we were there to help someone. **We simply were the enemy.** It was so bad, that after a while we just stopped coming.





danger.

if any
taught

Fig. 093 | Jigsaw piece #10

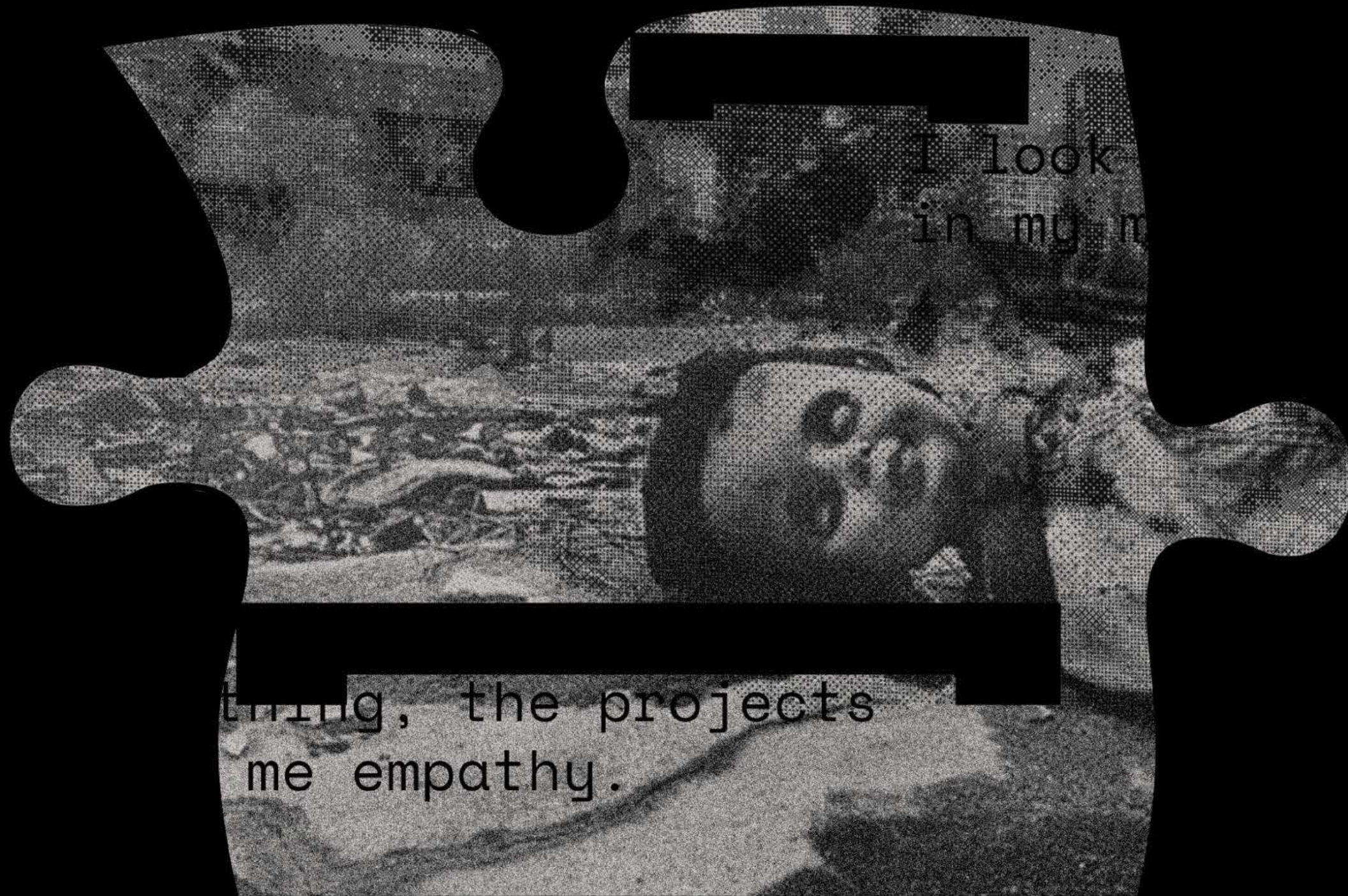
BRIAN KING

LIVED AT PRUITT-IGOE FROM
1967 UNTIL 1971

I was with my older brother one day on the steps, and he was snacking on some peanut butter crackers, but he was mad about something. I don't know what he had going on, but he wasn't talking to any of us. I asked if I could have one and he was like, "Nahhh," so I said whatever and went off to go hang out in our place with my mom and dad instead. A little bit later we heard what sounded like some shots or something going off outside, and like two minutes later there was a rapping going on at our door. It was my brother's friend, Herb, he was all panicked. "They shot Beanie!", that was what they called my brother. We ran downstairs and found him in the hallway. He'd been shot by a shotgun at point blank, and his innards were out in front of him, his liver was totally detached. My mom ran to him and tried to shove everything back in and hold it together, but she couldn't. My brother looked up to her and asked "Mom, I'm gonna die, ain't I?". And she said, "Yea.", and he said "I'm not afraid to die..." and that was the last thing he really said to her.

We were bitter after that. There was no more being family, or cohabitating with our neighbors. I remember, it took me 8 years before I stopped dreaming about it. For those 8 years, all I could think about was: how do I murder somebody. It was hell to be trapped there, stuck in my thoughts. I always wonder what it would have been like if we had never moved there. Would I have been nicer, a better person? I always see people from better environments than me, and I'm envious of how kind they are. I never got the opportunity as a kid to just... exist in a peaceful place. I appreciate quiet, kindness, peace - I don't take it for granted. I mean, **if anything, the projects taught me empathy.**





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in my m

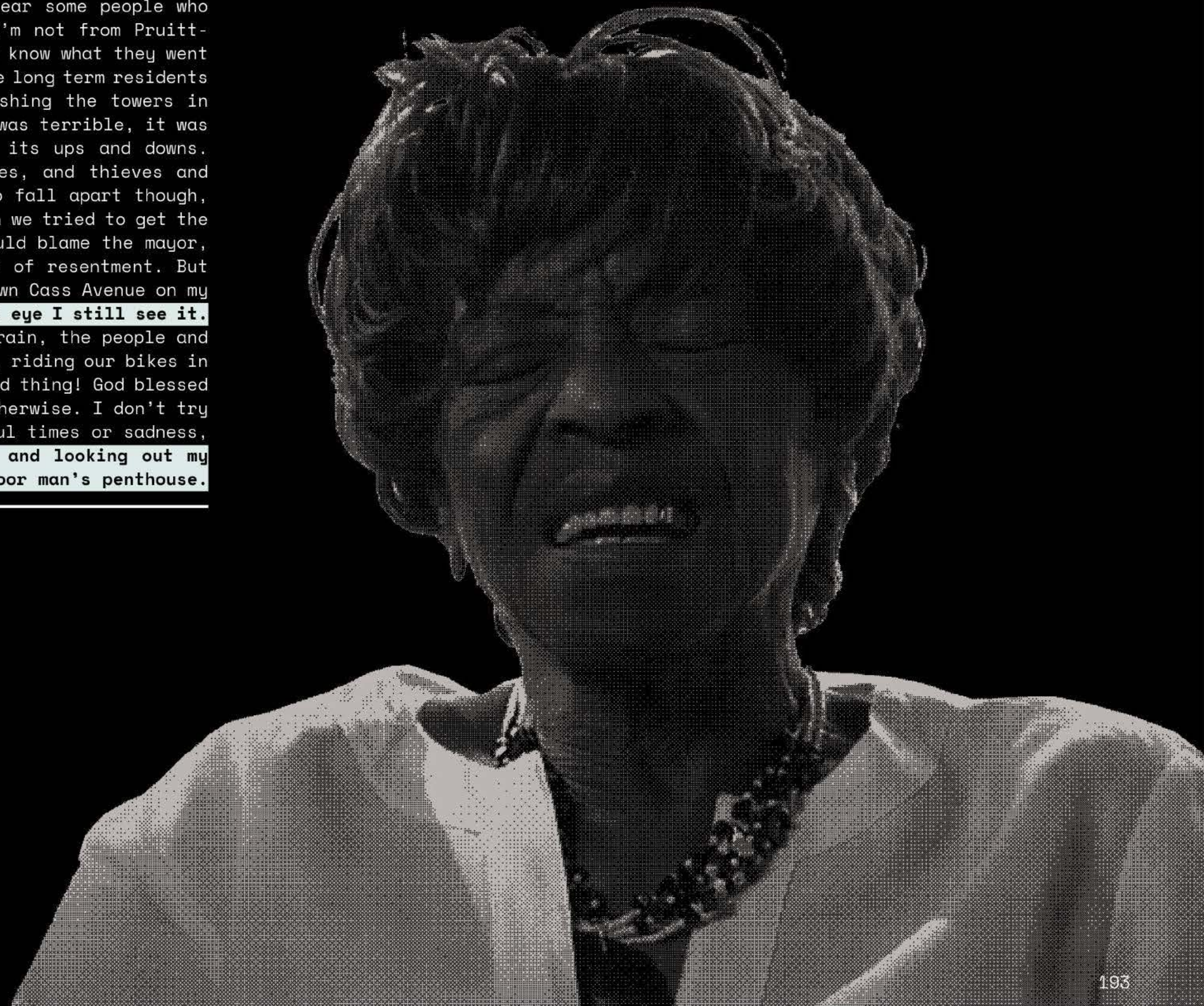
thing, the projects
me empathy.

Fig. 094 | Jigsaw piece #11

RUBY RUSSELL

LIVED AT PRUITT-IGOE FROM
1954 UNTIL ITS DEMOLITION

I loved Pruitt-Igoe, I really did. You know, I hear some people who say "oh, don't let anybody know I'm from there, I'm not from Pruitt-Igoe," and I just don't feel that way, but I don't know what they went through. I don't know their stories... I was one of the long term residents of Pruitt-Igoe, so when they finally began demolishing the towers in the 70's they invited me out to see it happen. It was terrible, it was almost like losing a child... Sure, the place had its ups and downs. I know it had its share of drugs, and prostitutes, and thieves and whatever, but I still cared for it! It started to fall apart though, and when you'd call for help, none would come. When we tried to get the housing authority to take responsibility, they would blame the mayor, who would just blame the fed, so there was a lot of resentment. But still, you hated to see it go. Whenever I drive down Cass Avenue on my way to church, **I look at the trees and in my mind's eye I still see it.** I still remember so much of it, the snow and the rain, the people and people getting beat up, having parties and dancing, riding our bikes in the streets - you know, it was a home! It was a good thing! God blessed us with that and I won't let anyone convince me otherwise. I don't try to, but I find that when I'm going through stressful times or sadness, **I'll have dreams where I'm back in my apartment and looking out my window over it all. Pruitt-Igoe was my home; my poor man's penthouse.**

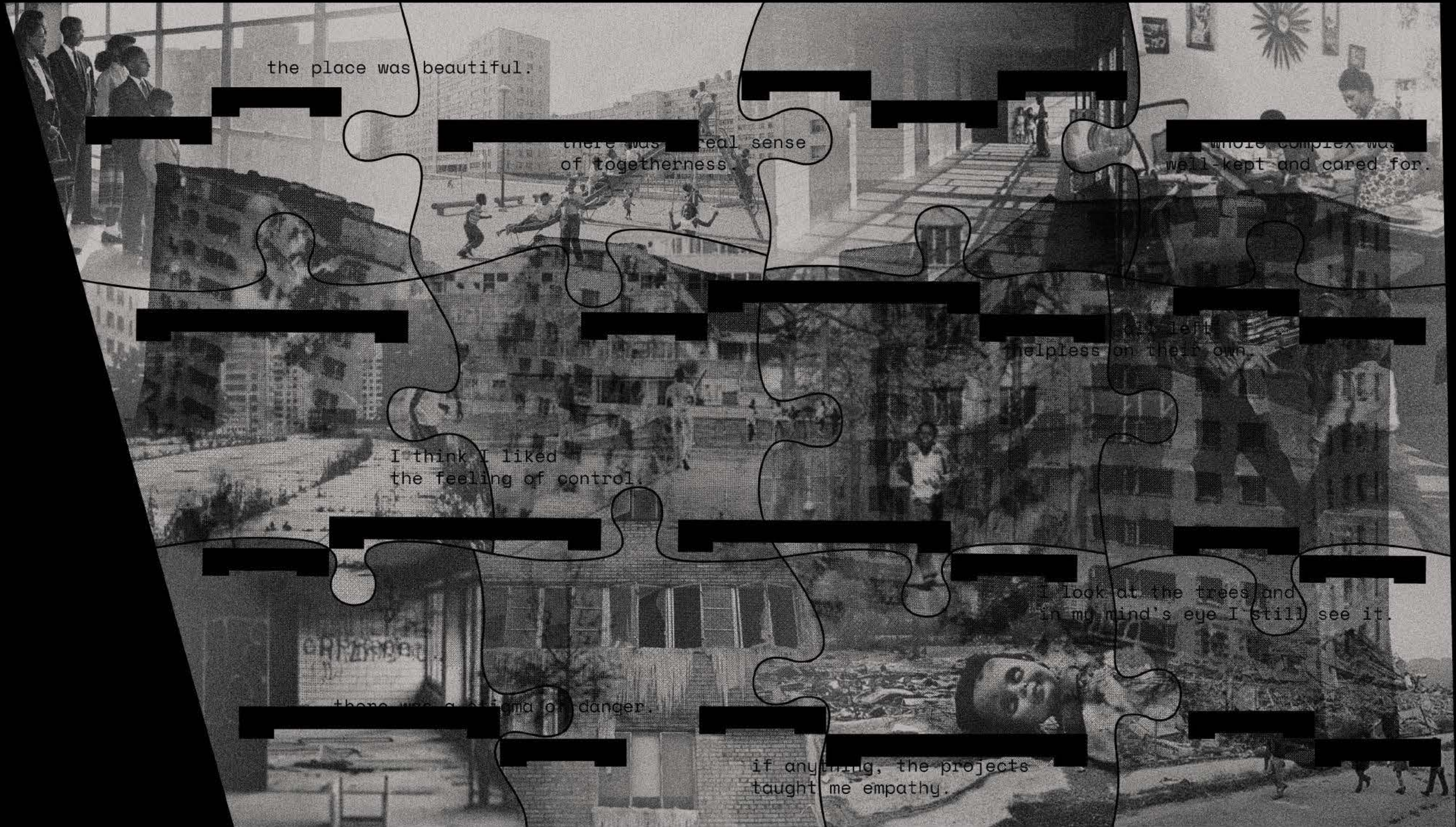




at the trees
ind's eye I

see it.

Fig. 095 | Jigsaw piece #12



the place was beautiful.

there was a real sense
of togetherness.

the whole complex was
well-kept and cared for.

I think I liked
the feeling of control.

they were left
helpless on their own.

I look at the trees and
in my mind's eye I still see it.

there was a stigma of danger.

if anything, the projects
taught me empathy.

Fig. 096 | The Pruitt-Igoe puzzle

That was Pruitt-Igoe. **It was a beautiful modern utopia with playing children and bright green lawns. It was a brutal hellscape of violence and oppression.** Since its demolition, the site has grown mature trees, and nature has claimed the remaining few structures. Trash has collected in piles around the site, while the surrounding blocks of tenements have slowly deteriorated and diminished. Zoning ordinances and urban renewal efforts from the mid century have left the city where Pruitt-Igoe and its surrounding slums were disadvantaged and clearly contrasted from their neighboring areas. The contrast in modern demographics is so clear that there is a named split called the Delmar Divide in St. Louis just a half mile south of my site. North of this line in St. Louis, the population is 99% black, the median annual income is just over \$21,000, and roughly 10% of the population holds a Bachelor's degree or higher. Contrast that with the neighborhoods immediately south of Delmar which are 73% white, have median annual incomes of \$62,000, and 70% possess at least a Bachelor's degree. The pieces of the puzzle that made up St. Louis were deliberately cut to forget about Pruitt-Igoe and the people who were there, while **those who escaped during the years of urban renewal got their American Dreams..**

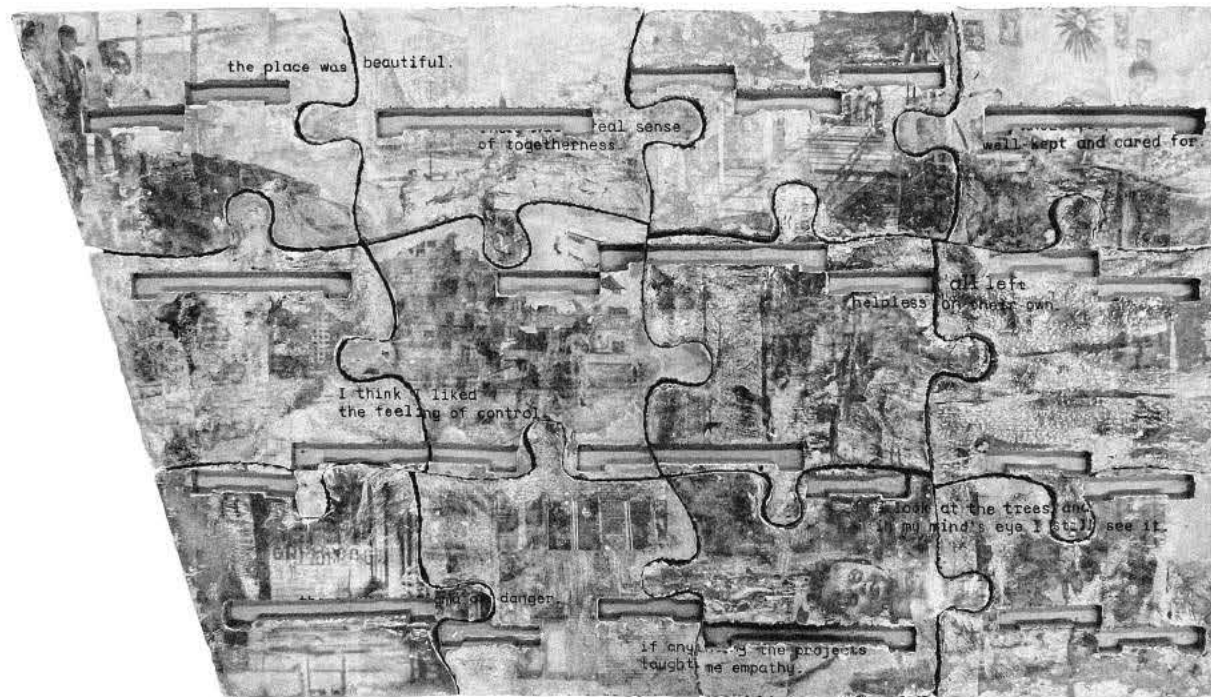


Fig. 097 | The assembled physical puzzle



The stories of life in the projects at Pruitt-Igoe illustrate an image of living that is tattered and hardly straightforward, but they collectively reveal the bridges that were broken between the people who lived there, their built environment, and the rest of the world around them. Simultaneously, those stories point to what was great about Pruitt-Igoe, contrary to all of the negative press it's received over the years. When you pay closer attention, important lines come from simple messages that describe an architectural experience necessary for healthy communities. Ruby started it off simply for us in describing her "poor man's penthouse". There was a real love of the place she got to care for and call her own, and it was beautiful to her because of that. Betty described the togetherness she felt with her neighbors due to their proximity to one another, and how she really felt a community through that constant presence of people she knew. Brian reveals something crucial though that Pruitt-Igoe lacked entirely, disconnecting the people there from each other, the surrounding city, and their own homes. He fled to the fields to catch bugs to get the only sense of control that he could as a kid. Like everyone else living in the projects, he had no real agency over his or his loved ones' lives, ultimately losing his brother to the cruelties that their environment manifested, and never having the opportunity for things as simple as peace and security in his own home. His tragic reality trapped him not only physically in what was more a prison to him than a home, but also mentally left him stranded without any space for solace for an entire 8 years. **Without personal agency or security at home, or even upkeep, Pruitt-Igoe was destined to fail these people no matter how attractive or grand the buildings could have ever been.**

The answer to resolving the faults of Pruitt-Igoe lies there - in the agency that people have over their living situations. Those who hid the story of Pruitt-Igoe into its puzzle held the same tools that we hold today. What's stopping us now though from lending our tools and expertise to the people we're designing for? Rather than designing our own idea of a utopia for them and making the same mistakes as the past, we can design a collective vision of a better future with them, by sharing the design process.

By putting tools in the hands of everyone involved in the process, we can shatter the story as it was cast by the people in power before us, and allow for a collective rearrangement of those fragments on each of our own terms. As architects and leaders in the design process, our role is to find the important fragments of the whole design to center it around, but by allowing the pieces around those fragments to organically be arranged, a community's mosaic comes to life - one where the built environment has actual human value instead of just investment value. In this case, **I'm focusing the new design around what the stories had mentioned earlier, control, opportunity, community, security, and beauty for every occupant.**

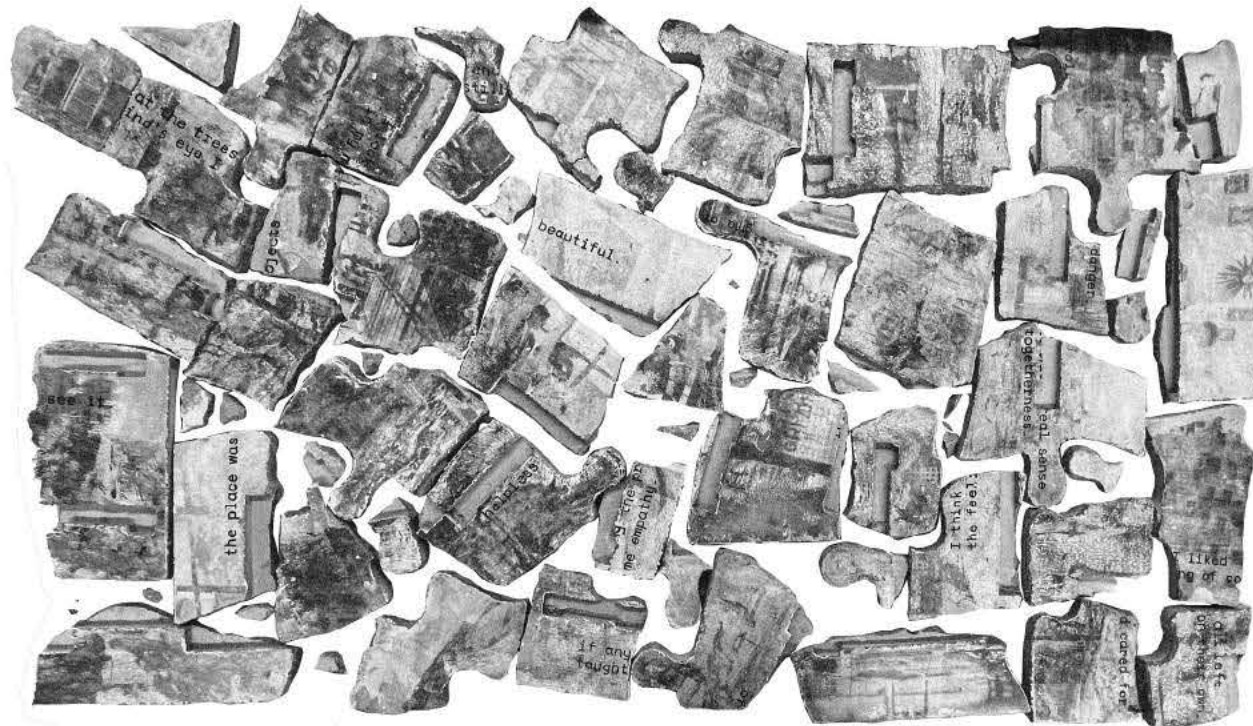


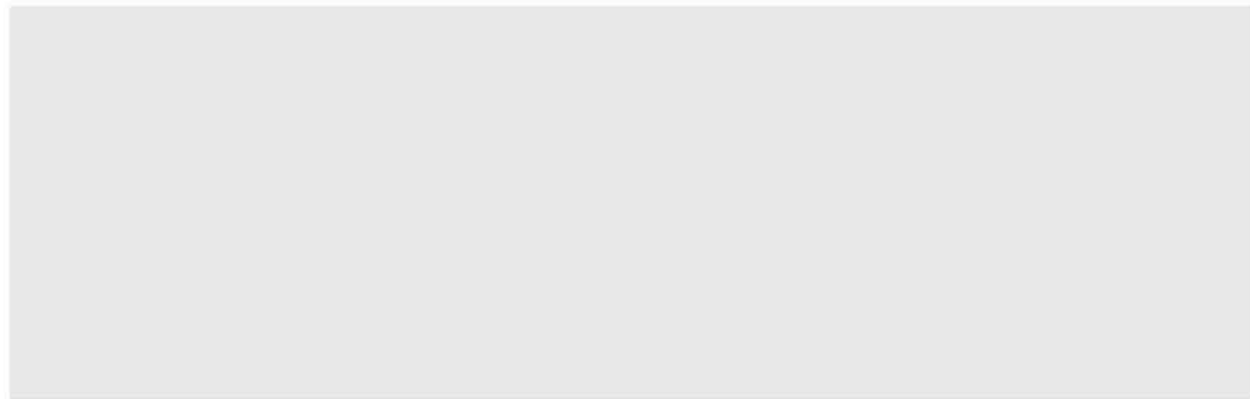
Fig. 098 | The fractured puzzle; assembled mosaic

My architectural translation of this idea will be to redevelop the remaining 33 acres of empty land at Pruitt-Igoe into low density social housing, this time with **incremental dwelling units gathered around community focal points, that residents themselves can design and build additions onto through a designated kit of modular parts.** While the up front costs of dwelling construction are minimized by building only part of an entire unit, those occupants also have the agency to create their ideal living space at a small scale in time. As for opportunities, the changing city around the site has introduced a number of new schools for multiple ages and abilities, as well as new distribution and retail centers to the south and a new government office campus being developed across several blocks north of the site. Additionally, the site is along 3 major public bus routes connecting downtown St. Louis to the greater metro area. The community around the site has continued to exist and grow in small event centers, churches, the schools, and focal points elsewhere throughout the city, but has the opportunity to be amplified again into a concentrated area like a public housing block, given potential amenities like community gardens, galleries, and parks. The site has access to emergency services and security as both police and fire services are headquartered near the site, however the nearest healthcare centers are further downtown. The beauty for this project is in the collective and diverse source of its conception, unlocking the ability for near infinite arrangements of people, spaces, and communities as a whole through sharing the design process.

The project's nature is meant to ensure agency for the people it serves in their built environments, and to turn over the typical American ideals of individualism and hedonism for collective action and effort towards a better tomorrow. This historic plot of land is situated in a prime spot to re-engage with the rest of the metro, and could act as a catalyst towards equality and prosperity across the city, both north and south of Delmar. The purpose of this model of housing is to offer the means for a community to craft a home for itself through collaborative cohabitation, and **bring forth the dreamed imaginations of thousands of people into the physical spaces they create and occupy for the betterment of their lives, all through the possibility of a collective.**

DESIGN PROGRAM

The design methodology I've derived from that artefacting exercise is a radical sort of "hands-off" approach - **I'm not going to firmly establish a complete plan for the site and tell these people how to live, in some version of an environment conceptualized on my own.** Just like how the hammer and chisel were passed around during the breakup of my artefact into its final form, the process and tools of design can be passed back and forth between architect, dweller, and builder. Instead of imposing a design that I personally would find ideal, I'll propose general suggestions and guidelines for some structures across the site. Part of providing a guide for a potential site design will be deriving cues from past structures and stories before and during Pruitt-Igoe's time, as well as providing the foundation for residents to begin establishing a new cooperative from, in the form of a central community center. Residents can then work cooperatively with each other and myself as an architect to frame spaces specific to their ways of living across the site, **creating the sort of "building as dwelling" phenomenon that Martin Heidegger first described.** By not leaving the framing of domestic spaces solely to the discretion of designers and constructors, residents would have agency over their built-environment that was taken from the occupants of the site who first lived there during the time of Pruitt-Igoe. **Through having more agency over their environment and living conditions, the community that is formed becomes more equitable, culturally rich, and architecturally diverse.** My explicit goals with this project are as follows:



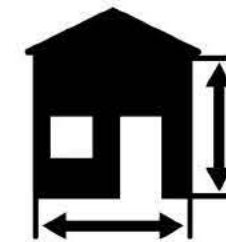
RENEW HISTORY

Pruitt-Igoe consisted of 33 11-story highrise apartment blocks. The project began as a revolutionary success for urban renewal, yet was demolished within decades due to its failures. Since 1976, the northernmost 33 acres of the old site have sat empty and abandoned.



CREATE OPPORTUNITY

After clearing the site of debris and overgrowth, new streets can reconnect the site to the St. Louis grid, while creating a focal point to orient the new dwellings around. The new Carr Neighborhood Community Center acts as the heart of the emerging collective.



BUILD TO DWELL

New interventions between the site, its residents, and their lives begin to emerge through the built-environment. As domestic shelters create space to dwell intimately, so to do site amenities and features which link intangible bridges between time, people and place.



MAKE EQUITY WITH AGENCY

The design process of the site is shared between its residents and planners to allow subsidized self-agency. Through the creation of incremental dwellings and site interventions, a culturally rich, equitable community comes to life.

SITE RECONNECTION

To develop on it, the site needs to be leveled out a bit, then new roads, paths, and transit stops can be laid down to reconnect the site to the city. Those routes would orient space across the site around a focal point to grow from.

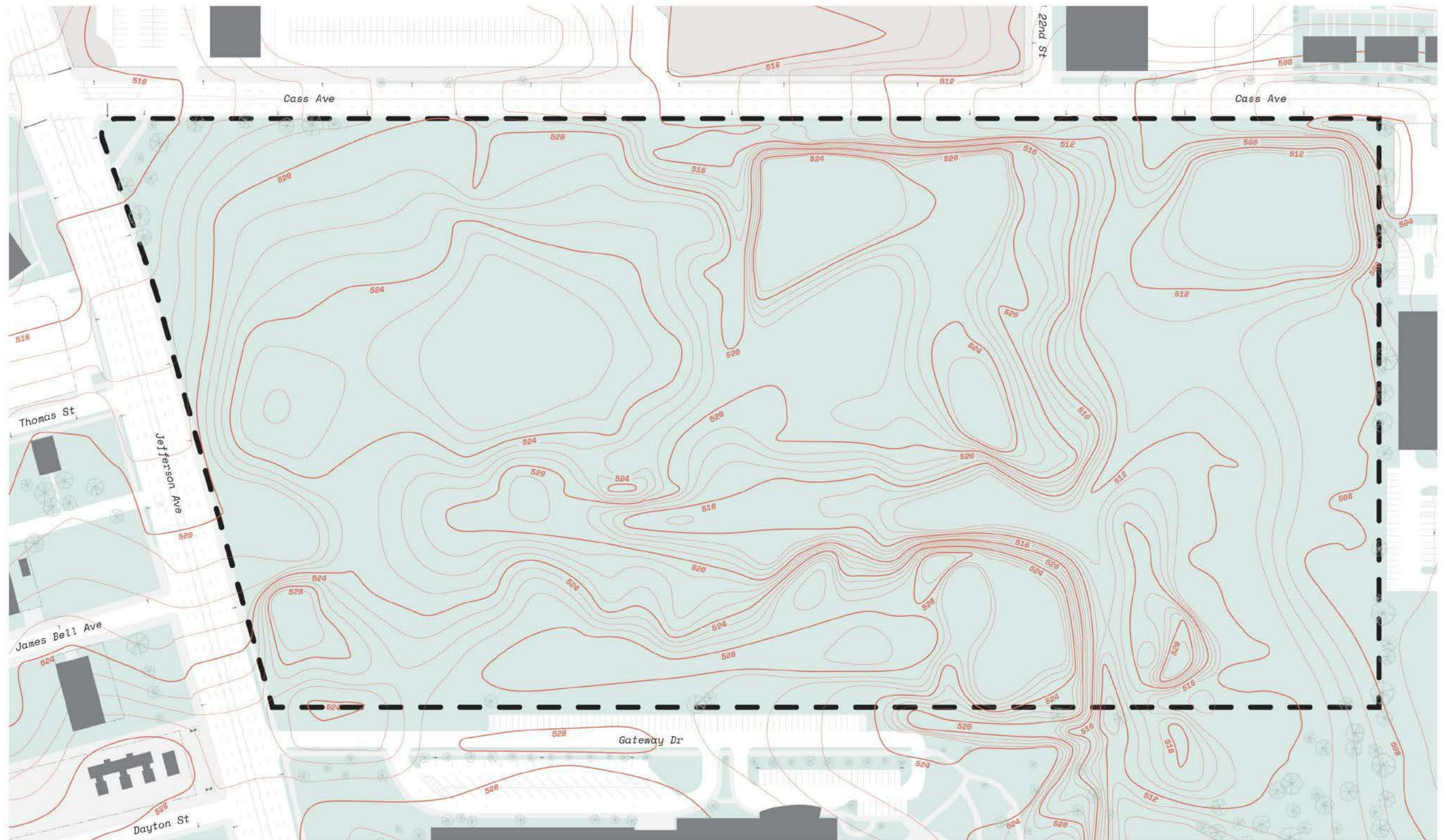


Fig. 099 | Empty Site Plan



THE COMMUNITY CENTER

At this focal point, a community center with spaces to support further building and dwelling can be installed, and become the heart for the collective to grow from.

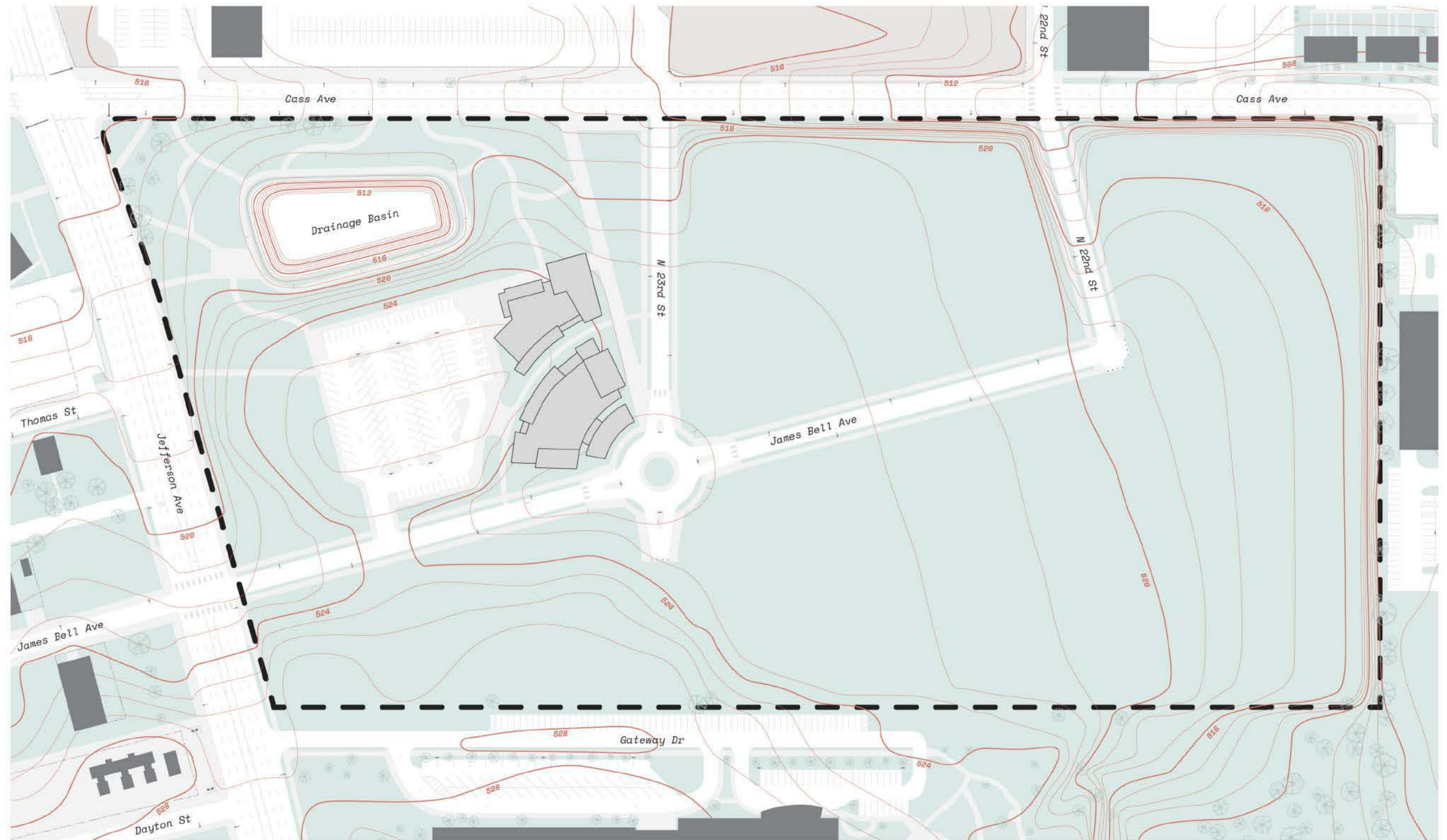


Fig. 100 | Reconnected Site Plan



THE COMMUNITY CENTER (CONT.)



Fig. 101 | The Community Center; Gallery Side



Fig. 102 | The Community Center; Extended Structures

This structure could derive fragments of Pruitt-Igoe's towers, to become visually representative of parts of the site's history, such as the gallery windows applied to the facade of an exhibition hall, or exposed and extended structural members, representative of residents of the past community and their stories, rising outwards from the old towers' rubble. Features composing the community center might include spaces meant for collective diplomacy in the form of a community forum. They might also consist of areas for cultural performance and exhibition, such as galleries or a staged area. To support programmatic development, it could be filled with offices to host production, collaboration, and more intimate diplomatic discussions between residents, designers, leaders, and other service workers. Additionally, to support community enrichment, there may be classrooms to pass on education, culture, history, and perspectives specific to the residents of the site. Finally, I'd suggest a small area for commerce, like a convenience store to provide necessities on-site.

PLAN LEGEND

1. Classrooms
2. Gallery
3. Performing Stage
4. Forum
5. Offices
6. Open Workspace
7. Conference
8. Convenience

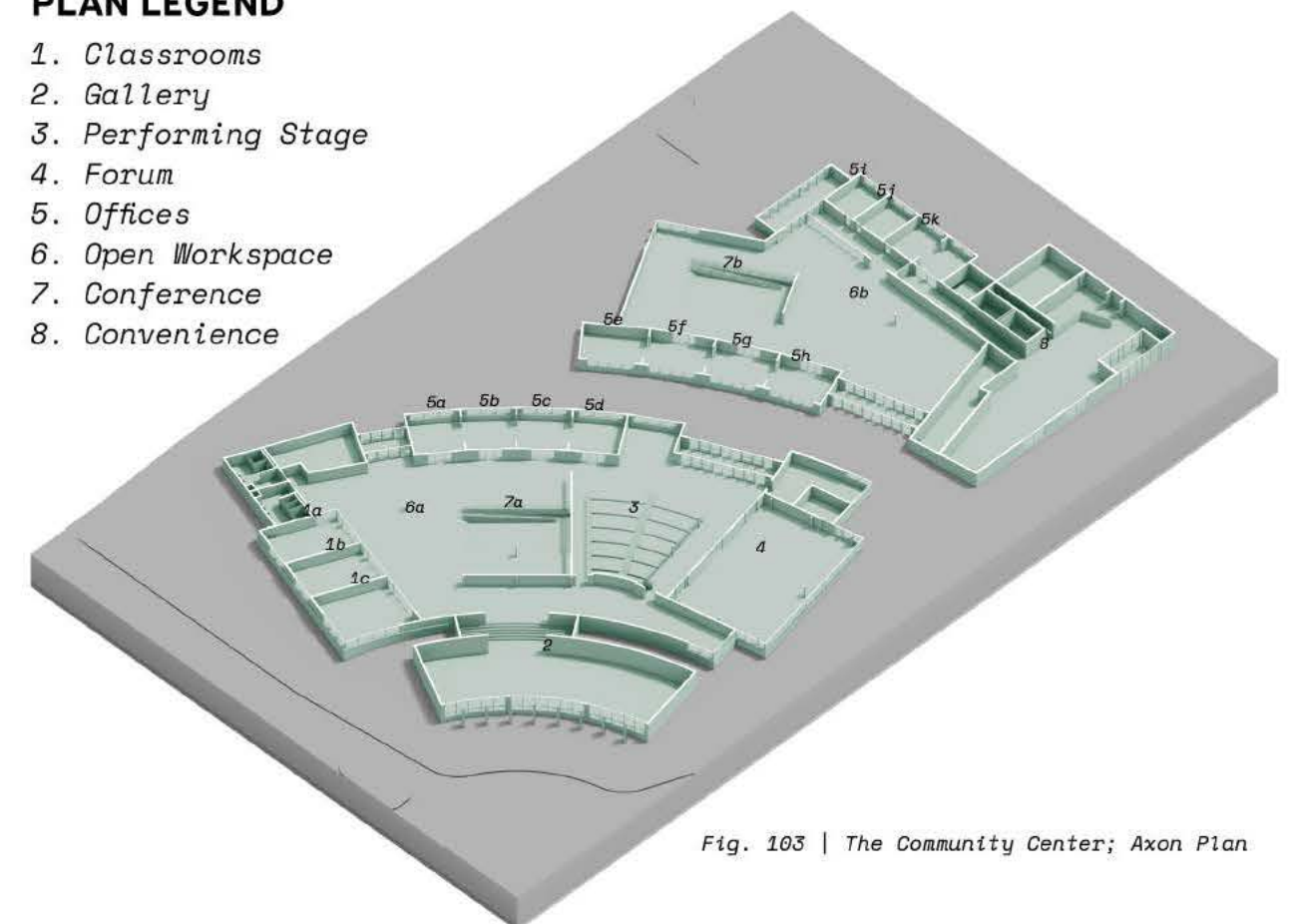


Fig. 103 | The Community Center; Axon Plan

INCREMENTAL DWELLINGS

With the community center established, residents can begin to build their own domestic dwellings around the site. These houses, like the site itself, can be made incrementally.

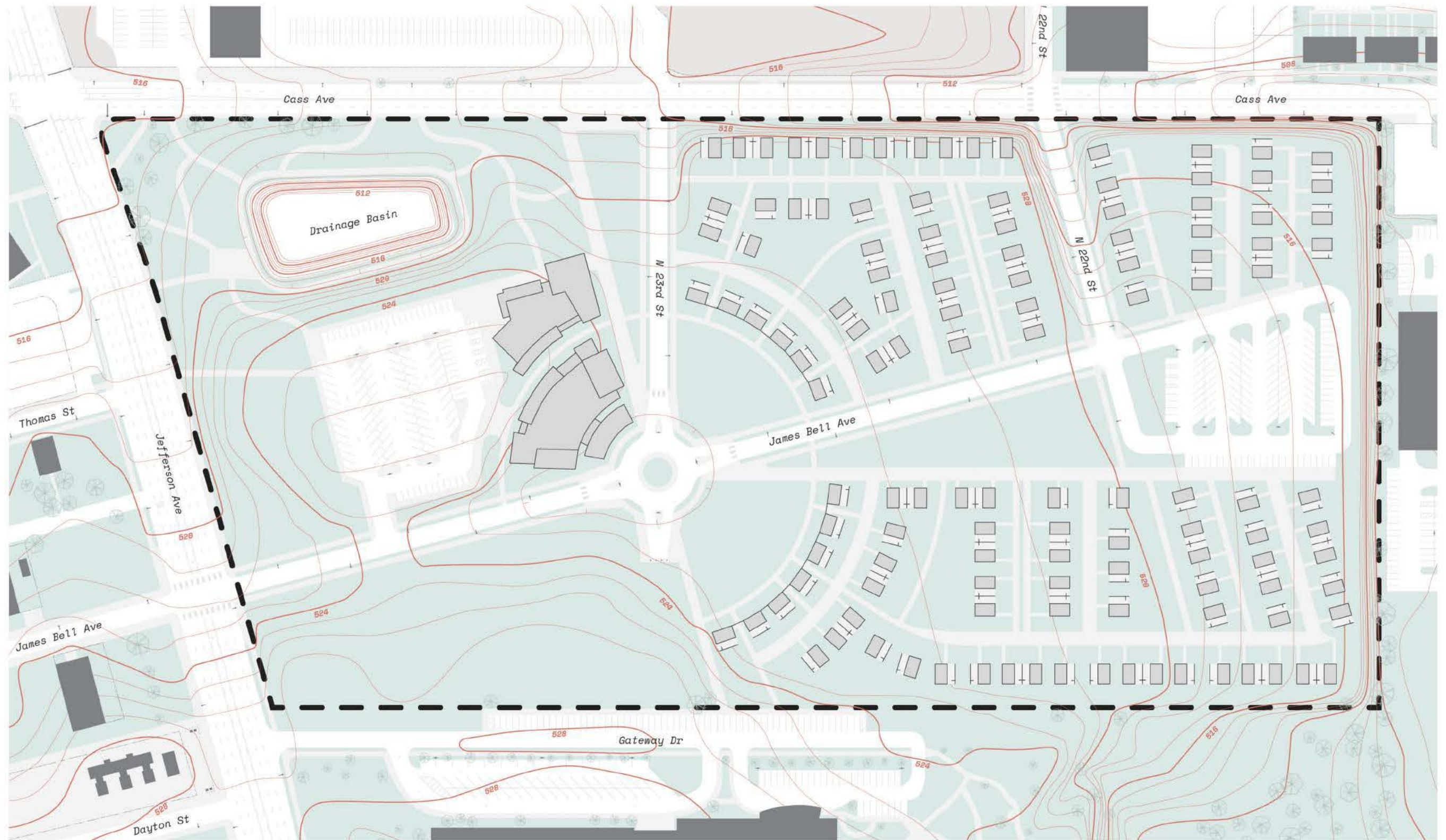


Fig. 104 | Possible Dwelling Placements

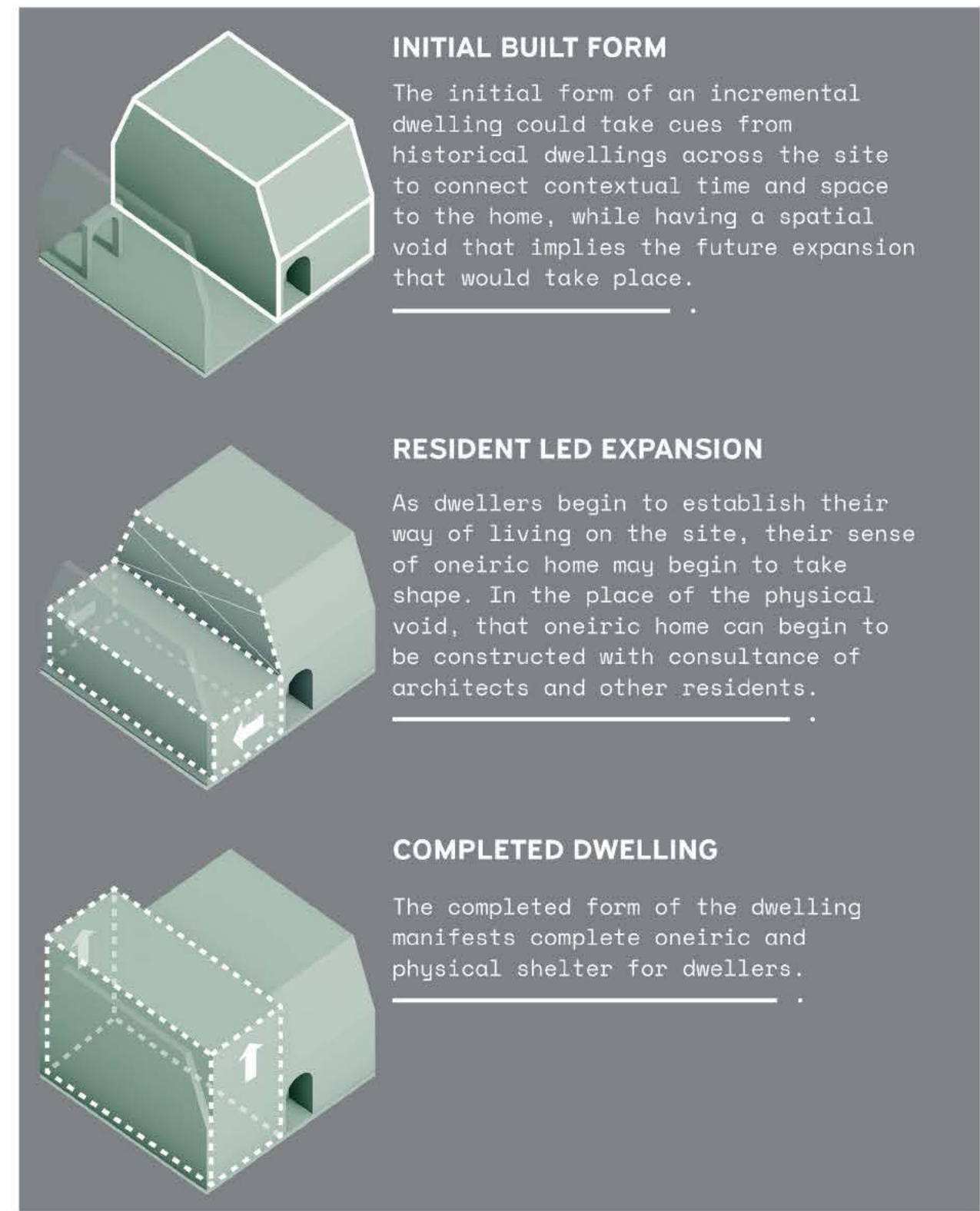


INCREMENTAL DWELLINGS (CONT.)

To start off the incremental dwellings on the site, necessary spaces and amenities that are more difficult to construct as a DIY project would be assembled within the shell of a small structure. That shell might resemble the vernacular tenements of early St. Louis, that existed on the site well before Pruitt-Igoe's time. To facilitate this, the role of the architect would be to supply the design for the initial increment of the dwellings, and then the resident would bring forth the ideas for the design of the rest of their dwelling, and build with support from the architect and rest of the community. These incremental homes begin with a kitchen and bath, as well as essential living spaces and bedrooms to support single people, couples, or small families. From there, the remaining half of the shell that was initially left as a void can be filled in by the physical manifestation of residents' oneiric homes.



Fig. 105 | New Dwellings on Site



INITIAL BUILT FORM

The initial form of an incremental dwelling could take cues from historical dwellings across the site to connect contextual time and space to the home, while having a spatial void that implies the future expansion that would take place.

RESIDENT LED EXPANSION

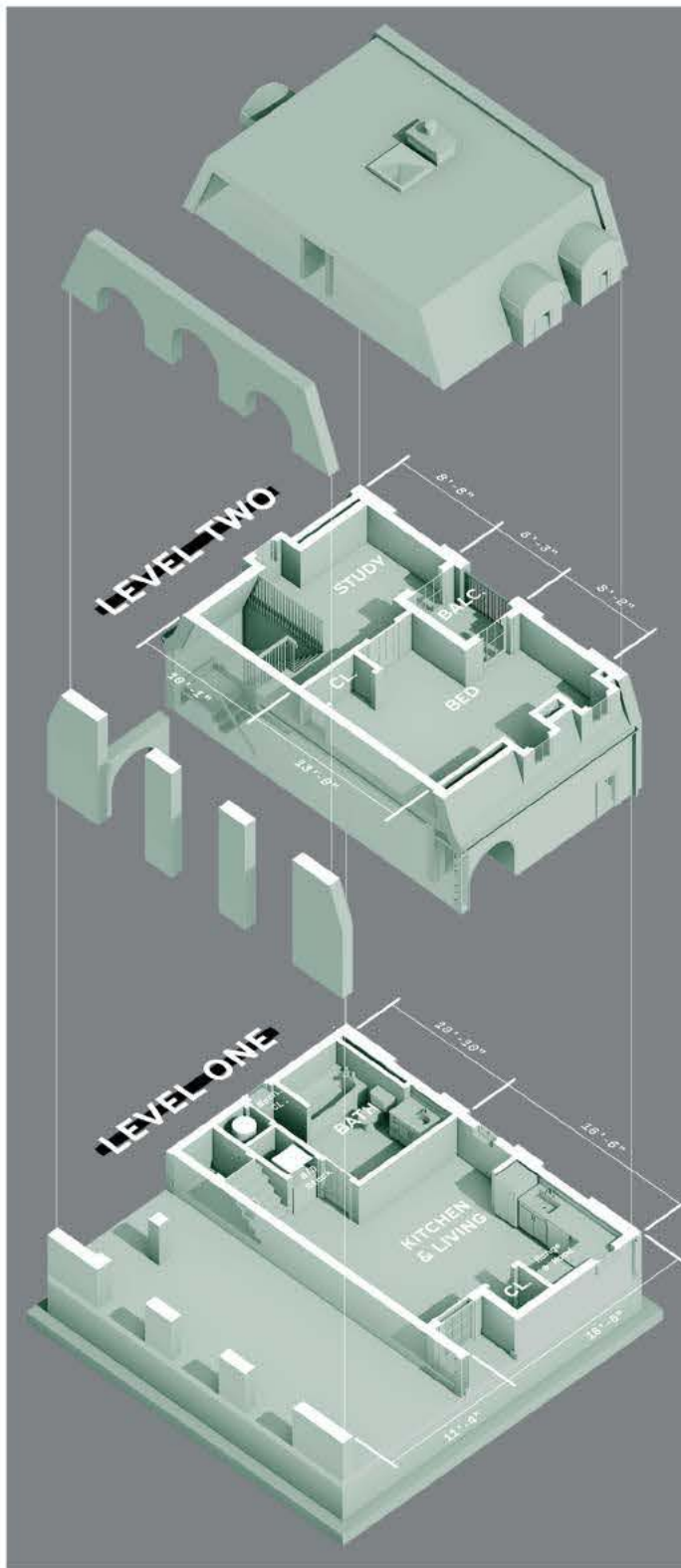
As dwellers begin to establish their way of living on the site, their sense of oneiric home may begin to take shape. In the place of the physical void, that oneiric home can begin to be constructed with consultance of architects and other residents.

COMPLETED DWELLING

The completed form of the dwelling manifests complete oneiric and physical shelter for dwellers.

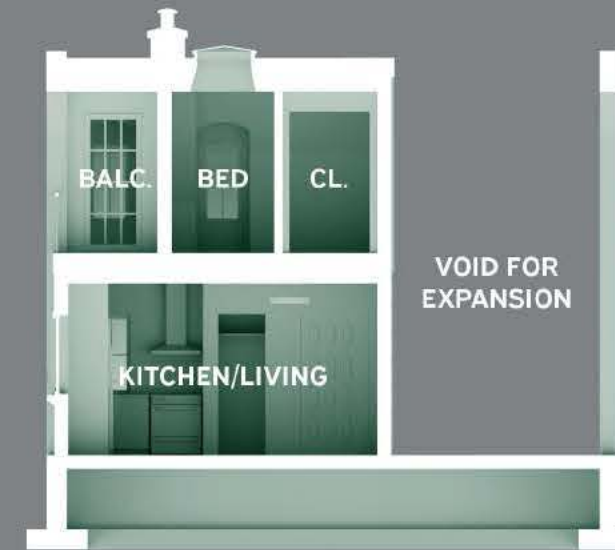
Fig. 106 | Dwelling Increments

INCREMENTAL DWELLINGS (CONT.)

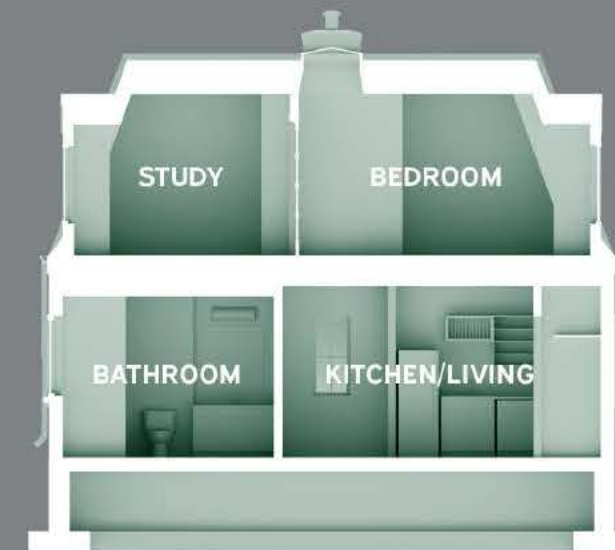


A POTENTIAL VERSION OF INITIAL DWELLING PLANS

My proposal for an initial dwelling would be one that mimics the vernaculars of previous St. Louis tenements. The initial structure would host 850 SF of space, which consists of kitchen, living, and dining space, as well as a bathroom and one to two bedrooms or a study where the second bedroom would be. The addition from residents in the void half of the structure would expand the space by 650 SF, and allow for the oneiric half of a dweller's home to be manifested. An artist could add a studio, a researcher could add a study, families a playroom, readers a library - so on and so forth until these dwellings each come to represent both oneiric and physical homes, and begin to act together as the environmental context that these people collectively make their metaphysical home out of.



LATERAL SECTION CUT



LONGITUDINAL SECTION CUT

Fig. 107 | Dwelling Axon Plan

Fig. 108 | Dwelling Section Cuts

INCREMENTAL DWELLINGS (CONT.)



Fig. 109 | Dwellings being completed; homes manifested

SPATIAL & TEMPORAL INTERVENTIONS

In the spaces between and around the dwellings on the site, there's an opportunity for the residents to cooperatively establish desired spatial and temporal interventions that would make up new amenities, while reviving fragments of stories from the site's history.

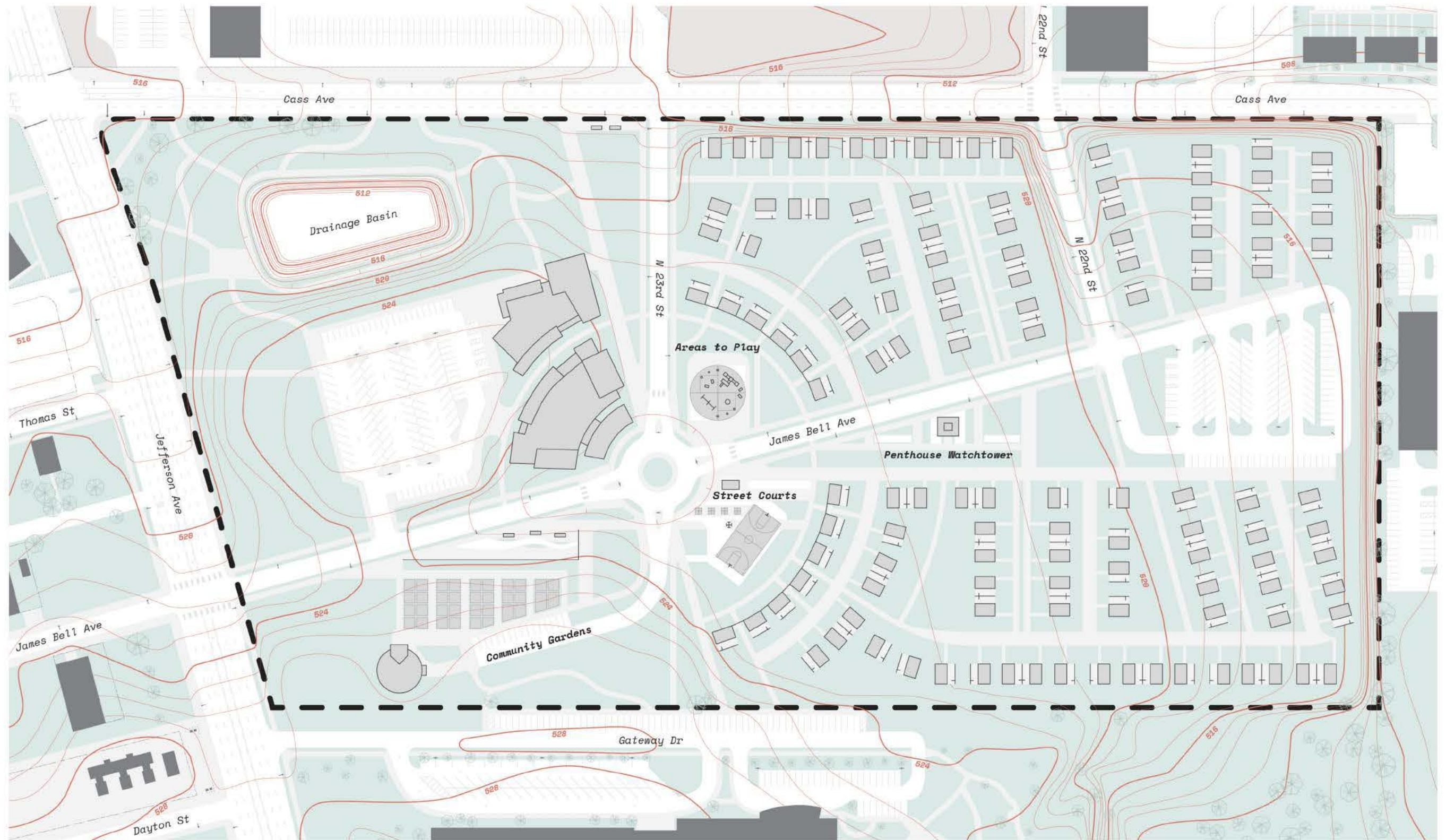


Fig. 110 | Additional Site Amenities



SPATIAL & TEMPORAL INTERVENTIONS (CONT.)

Similar to the process of scattering shattered fragments of my artefact across the plan of the old site, layering past stories and discreet site elements with the spatial desires of new residents can bring forth culturally and historically rich structures with the support of design and building professionals.

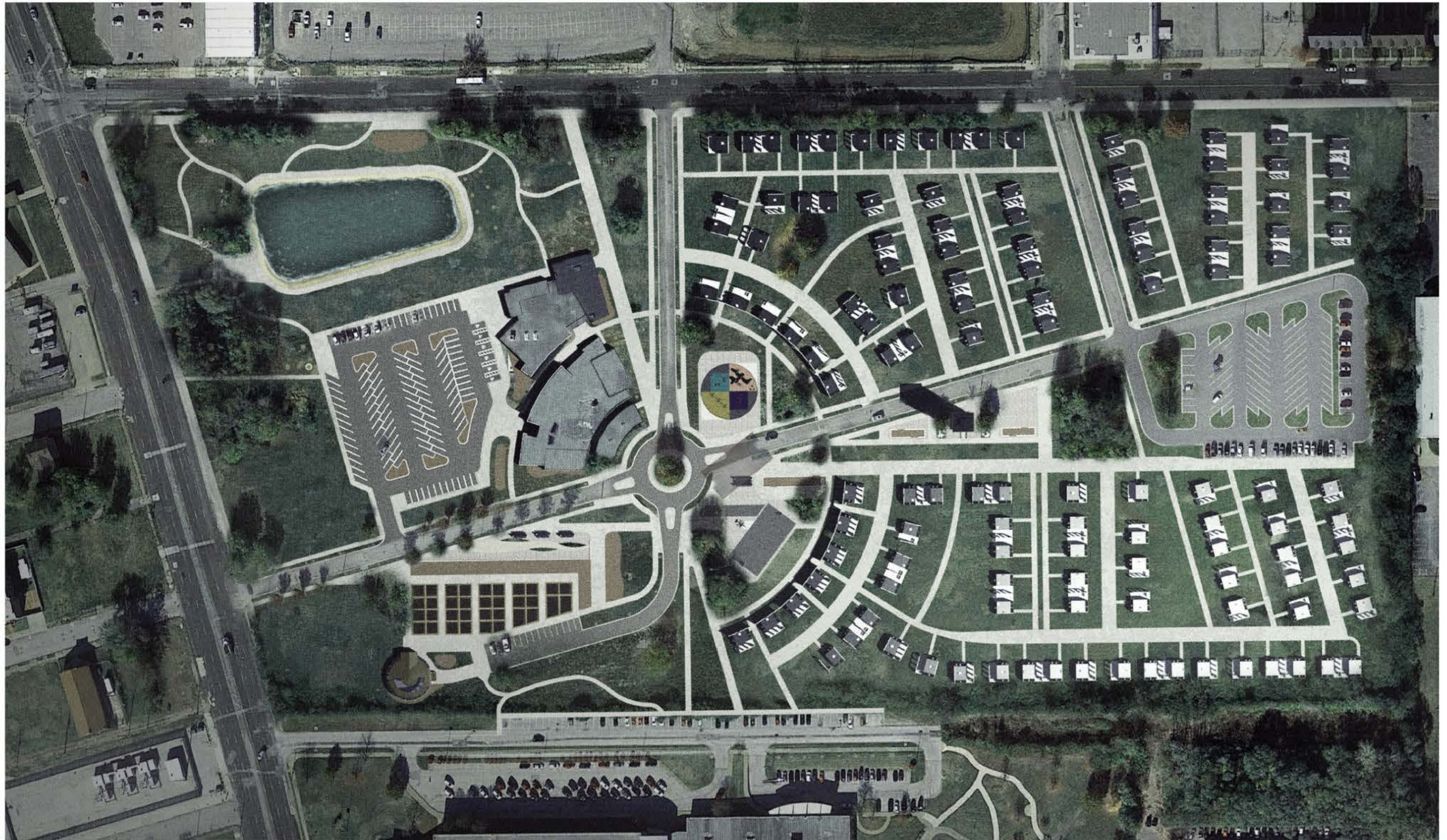


Fig. 111 | A Vision for a New Site



SPATIAL & TEMPORAL INTERVENTIONS (CONT.)

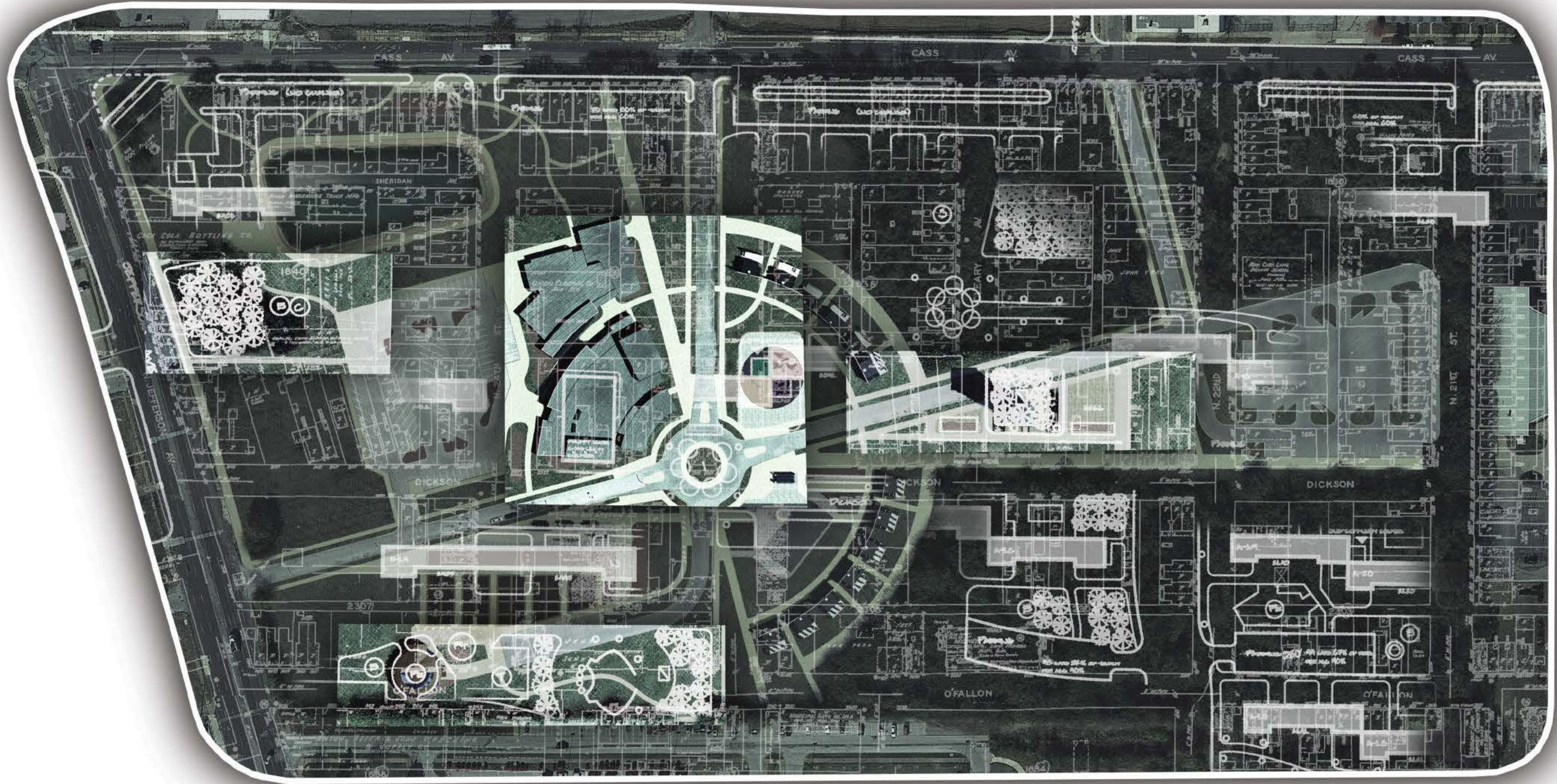


Fig. 112 | Spatial & Temporal Site Interventions

SPATIAL & TEMPORAL INTERVENTIONS (CONT.)

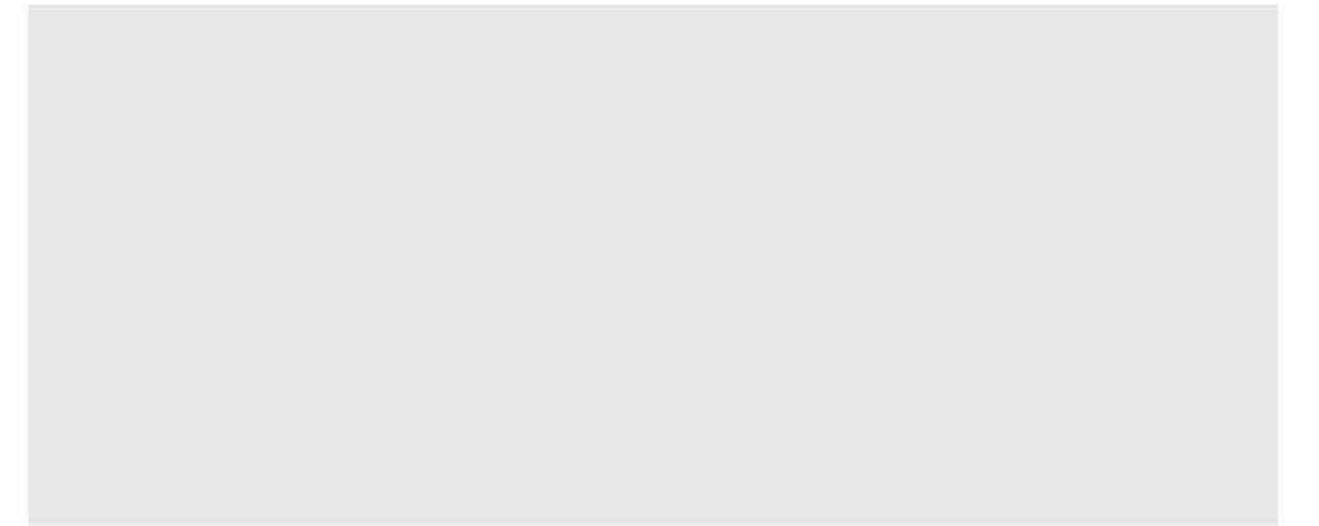


Fig. 113 | New Playgrounds

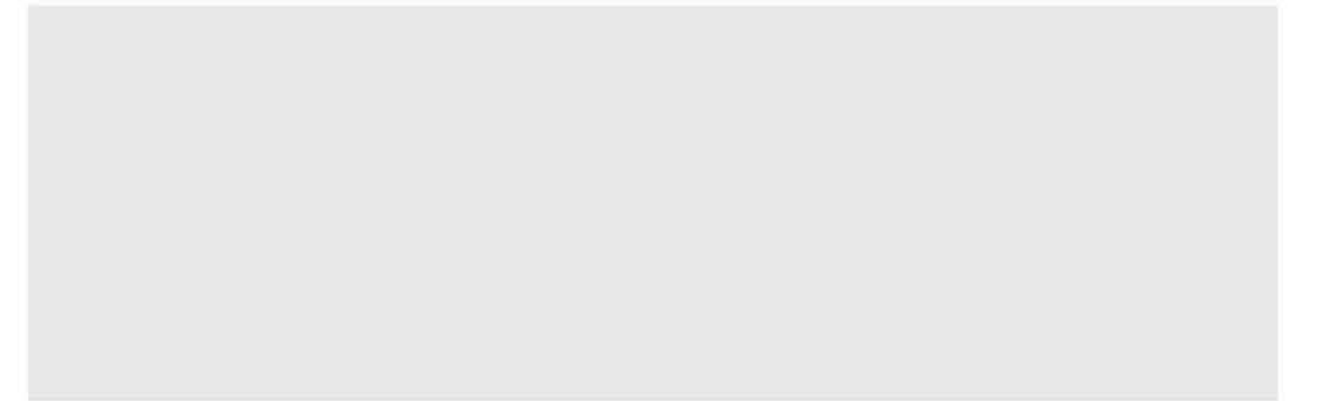


Fig. 114 | Greenhouse & Community Gardens

A simple reinterpretation of the streets which once defined Pruitt-Igoe's grid, could redefine those once-dangerous pass-through spaces into parks and plazas for dwelling, in which children could play, and people could socialize safely.



Another possibility exists in the fields bordering the site, where Brian King would have fled to in order to get a sense of control as a child. Space here could be allocated for a greenhouse, and divided into beds of flowers and garden plots for the community to plant and maintain, creating the lush greenery and beauty on the empty parts of the site that had once been planned to be landscaped at Pruitt-Igoe, but cleared in the process of value engineering.



SPATIAL & TEMPORAL INTERVENTIONS (CONT.)

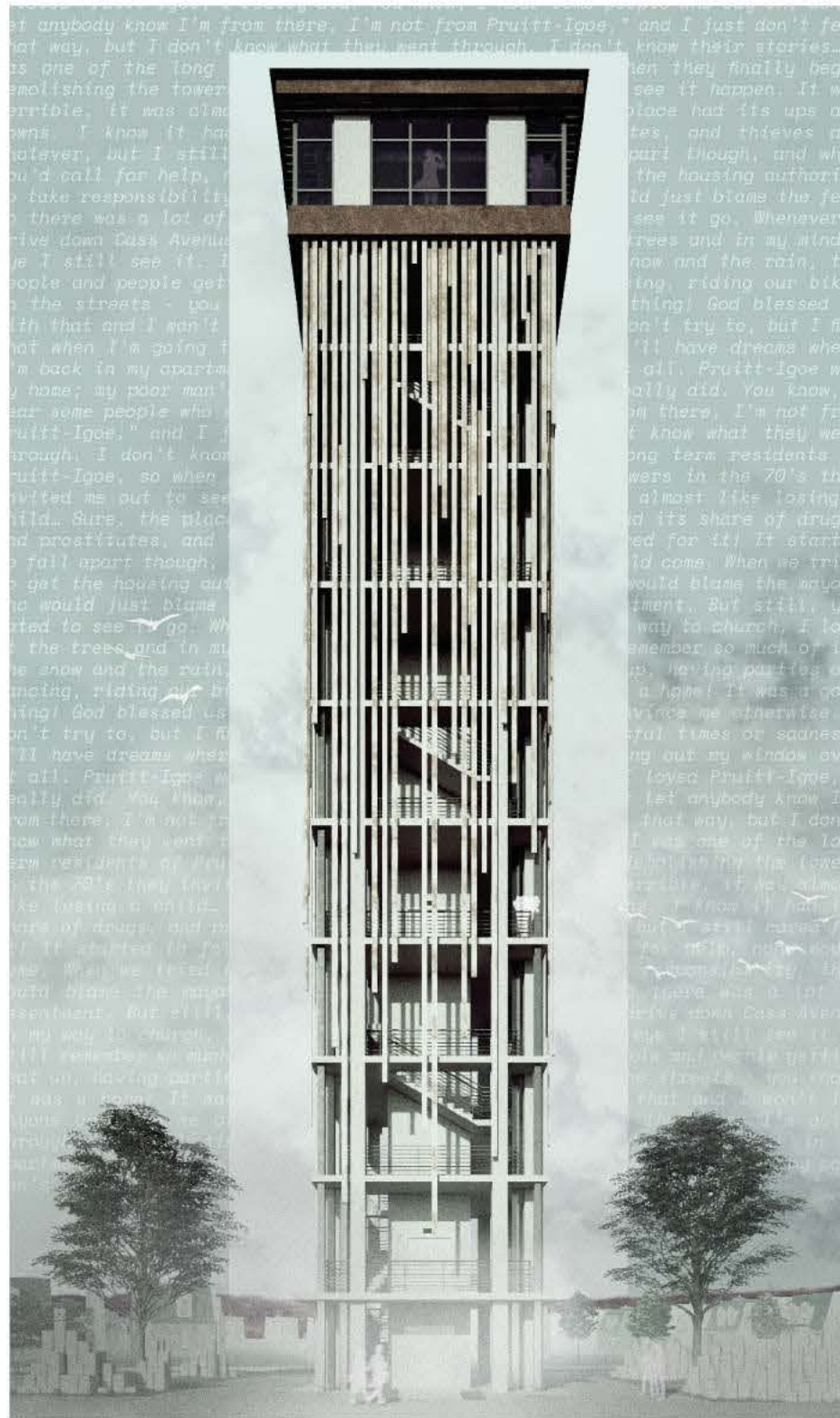
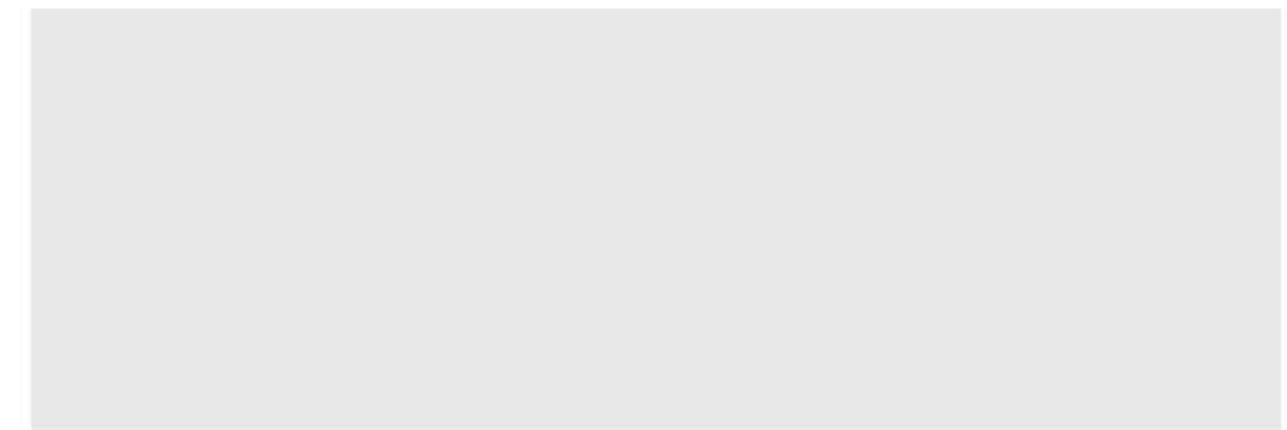


Fig. 115 | 'Poor Man's Penthouse' Watchtower

At a central location within the site, Ruby Russell's stories could also be distilled into the environment on the site. While the new dwellings and structures on the site are intended to bring forth the historic vernaculars before Pruitt-Igoe, perhaps the poor man's penthouse that Ruby described could be remade as a viewing tower reminiscent of the previous housing project, 11 stories in the air and with skip-stop elevators like Pruitt-Igoe's towers once were, but with a space at the top to look out from and take in the sights of St. Louis and surrounding neighborhoods, as Ruby once did.



In this cooperative design process of incremental creation, referential layering, and building to dwell, architects can support residents in enriching their built environment through mass amounts of cultural, historical, and spatial nuances that a top-down design approach from a singular vision is incapable of achieving. The amount of perspectives combined during the development of the site in this manner helps to negate the chance of a singular utopian vision being imposed, and turned into a forgotten dystopia. By developing the site and its structures incrementally, the residents of the site maintain the opportunity to manifest their desires in the built-environment, throughout the changing adaptations of space and time at the site. In doing so, agency is returned to a community of people over their built environment and material conditions. That agency is what allows for the community who was once marginalized by the impositions of the built-environment, to return their values, history, culture, and dreams to it. In doing so, the qualities of how we dwell are returned to the home, and the home in each of its definitions is made back into a dwelling, in the truest sense of the word.

DESIGN STUDIO EXPERIENCE



Fig. 116 | Zach Nelson, M.Arch

YEAR 1: 2018

Spring Instructor: **Heather Fischer**
Daylight Pavilion
Continual Delay Display


YEAR 2: 2019 - 2020

Fall Instructor: **Charlott Greub**
Land Artist's Studio | Moorhead, MN
Boathouse | Minneapolis, MN


Spring Instructor: **Milt Yergens**
Bridgehouse Dwelling | Cripple Creek, CO
"The Windy" Boutique Hotel | Fargo, ND

YEAR 3: 2020 - 2021

Fall Instructor: **Paul Gleye**
Somali Heritage Center | Fargo, ND
Gleye Hall & Student Housing | Fargo, ND

Spring Instructor: **Emily Guo**
425 E. Randolph Offices | Chicago, IL
Bridging Seasons Pavilions | Fargo, ND & Moorhead, MN 

YEAR 4: 2021 - 2022

Fall Instructor: **Mark Barnhouse**
1700 Atlantic Plaza Highrise | Miami, FL 

Spring Instructor: **Kristi Hanson**
Marvin Windows House | Middle Cormorant Lake, MN 
Medora Masterplan | Medora, ND

YEAR 5: 2022 - 2023

Thesis Advisor: **Stephen Wischer**
*Returning Home: Collective Dwelling through Incremental
Architecture | St. Louis, MO*

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May, 2023

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