

# Research Methodologies for Designing Locally

MS AAD Graduate Project  
Cornell University  
December 2021

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## Abstract

This thesis explores ways of aligning architecture with its local context, and re-assigning value to under-valued constraints in the design process. How does an architect understand what constitutes 'the local' in order to select/propose/insist on forces that are most appropriate in creating new spaces? This research compiles ideas of many individuals into a series of research-and-design approaches to better ground architecture in its local context. Rather than mandating which forces should become driving constraints in the design process, this research aspires to assist a design team in making design-constraint selections over time and in conjunction with stakeholders. Each chapter proposes a particular research methodology, provides references to thinkers who have advanced the method and explains the method with an example. Methodologies to ground architecture in "local" attributes include understanding the habits of a community and their collective memory, genre and translation theory, and an approach to design with the community.

## Acknowledgements

This research would not have been possible without Jeffrey and Ingrid Crouch with their conceptual and grammatical input; Professor Esra Akcan for her help in focusing the direction of inquiry; Associate Professor Jesse LeCavalier, Associate Professor Jeremy Foster, Associate Professor Val Warke, Visiting Associate Professor Scott Ruff, Assistant Professor Tao Dufour, and Visiting Critic Peter Robinson for their insights that provided the launching point for each research methodology; and finally Jessica Crouch, whose continuous support has enabled and encouraged the whole process.

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# Infrastructures of Habit

Research the infrastructure supporting a habit to identify how architecture can operate on leverage points within that infrastructure to modify or enhance the habit.

*This methodology was developed through the Architecture+Urbanism studio module of ARCH 7111, led by Associate Professor Jesse LeCavalier. The example project was created with a group of MS AAD students: Chen Chen, Ruixin Wang, Santiago Vasquez, Seerat Athwal, and myself. Graphics are done by me unless otherwise noted.*

One of the ways to understand local culture (and thereby enable a design team to better align architectural form with its context), is to unpack the social and personal habits that are integral to daily life in an area. By mapping the systems that provide and facilitate habits, a design team can understand the specifics of how those habits manifest and move beyond general conjecture about local social patterns. Studying habit-empowering infrastructure assists a design team to delineate local habits that may be different from other contexts. Identifying these place-specific habits provide a focused list of attributes that can help a design team choose design constraints more effectively.

To develop architecture embedded in its context, it is important that the project has a particular attitude to addressing the habits of a place. Ambivalent architecture is usually placeless as its lack of care for local forces result in buildings that can degrade the sense

of place. Through the process of drawing, diagramming, and mapping the infrastructure of a habit, a design team's research can advance past generalizations and develop a deeper understanding that reveals moments of friction in an infrastructure and by extension the habits that it supports. Cataloguing and defining moments of friction provide a point of departure for the design concept to develop an attitude towards that habit to reduce this friction and ultimately respond to and enhance local culture.

Donella Meadows, in her text *Leverage Points: Places to Intervene in a System*, provides a range of changes one can make at moments of infrastructural friction to improve that system. (see Figure 1.1) Arranged from least effective to most effective, Meadows constructed this list after extensive study of supply-chain infrastructure that provides the backbone of items and ideas we exchange in creating culture. Each statement on the list represents a category of economic and social infrastructure that is embedded in all existing human systems. Visually mapping this infrastructure reveals specific categories in the list which are central to local habits and define

- Places to Intervene in a System  
(in increasing order of effectiveness)
12. Constants, parameters, numbers (such as subsidies, taxes, standards)
  11. The sizes of buffers and other stabilizing stocks, relative to their flows.
  10. The structure of material stocks and flows (such as transport networks, population age structures)
  9. The lengths of delays, relative to the rate of system change
  8. The strength of negative feedback loops, relative to the impacts they are trying to correct against
  7. The gain around driving positive feedback loops
  6. The structure of information flows (who does and does not have access to what kinds of information)
  5. The rules of the system (such as incentives, punishments, constraints)
  4. The power to add, change, evolve, or self-organize system structure
  3. The goals of the system
  2. The mindset or paradigm out of which the system—its goals, structure, rules, delays, parameters—arises
  1. The power to transcend paradigms

the paradigm and system which the habits operate within. These categories provide a template to define friction in the system and chart a path for the design team to develop a targeted program and proposal that augments local habits by reducing this friction. As an example of this process, I and a team of students under the guidance of Jesse LeCavilier, designed a coffee roastery to enhance and become embedded in the vibrant coffee culture of Rochester, New York. A radially-planned city at the crossroads of the Genessee River and former Erie Canal, Rochester like many other cities has a burgeoning craft coffee scene that provides highly utilized spaces for socializing, working,

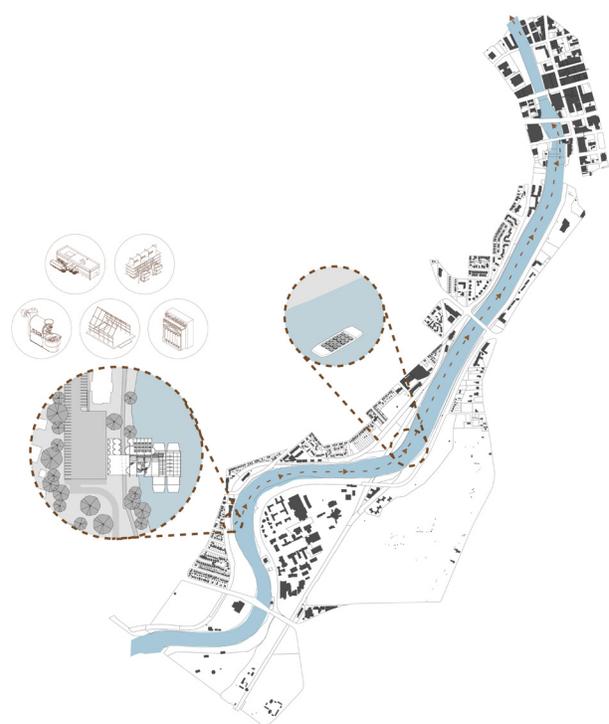


Figure. 1.1 // Meadows, Donella. Leverage Points: Places to Intervene in a System. (Hartland: The Sustainability Institute, 1999)

Figure. 1.2 // Genessee River Site Context // By Ian + Team

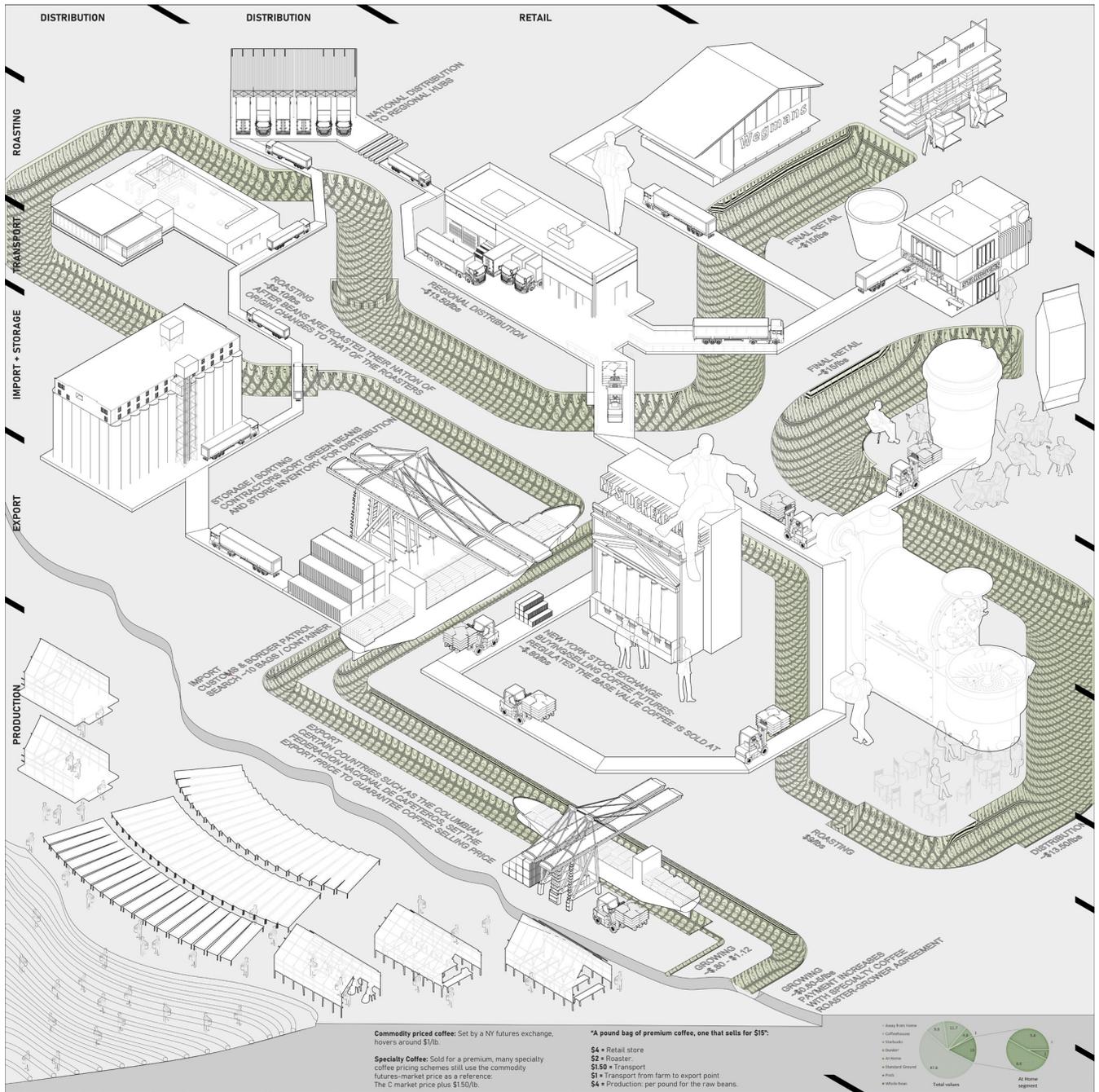


Figure. 1.3 // Coffee Supply Chain Map // By Ian + Team

and of course enjoying coffee. Coffee-culture is a useful example of this research approach as coffee is widely consumed and means so many different things to different people. Due to its range of meanings, 'coffee-culture' is at once kitsch and overly simplistic. People get their coffee at the grocery store, farmers markets, online, from coffee shops. Some

purchase the roasted beans, others get the grounds, and many buy it already brewed. The complex web of systems that supply the beverage create a confusing maze of infrastructure that supports the habits of an average consumer. To understand how this commodity manifests locally in Rochester beyond its uses in a

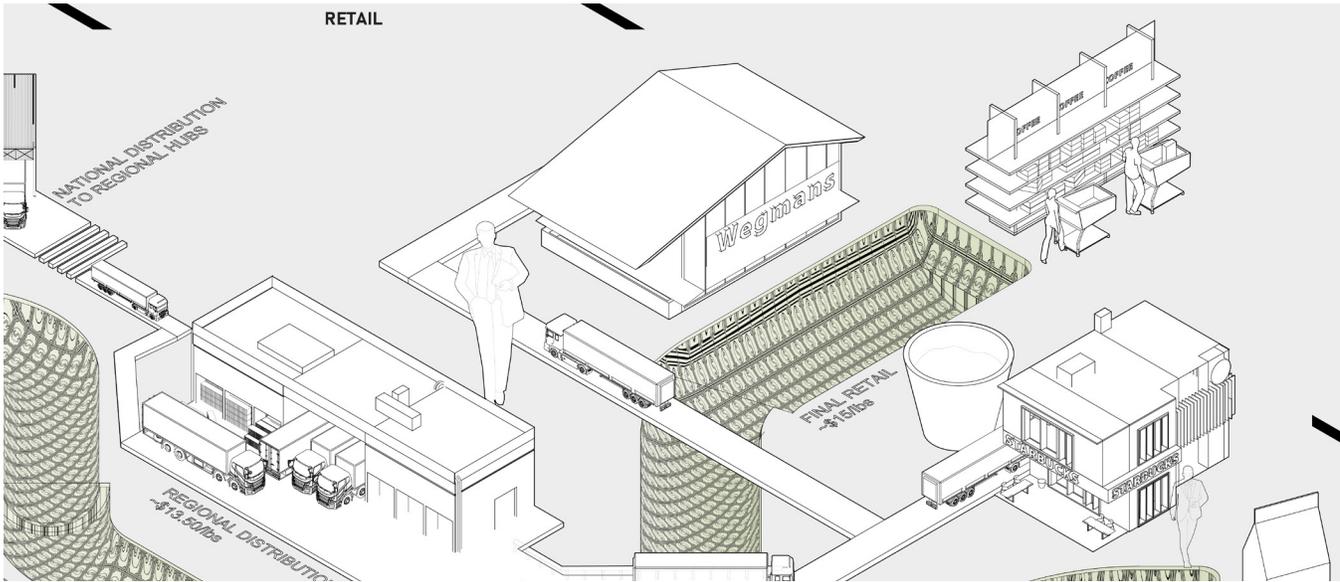


Figure 1.4 // Enlarged Coffee Supply Chain - Retail // By Ian + Team

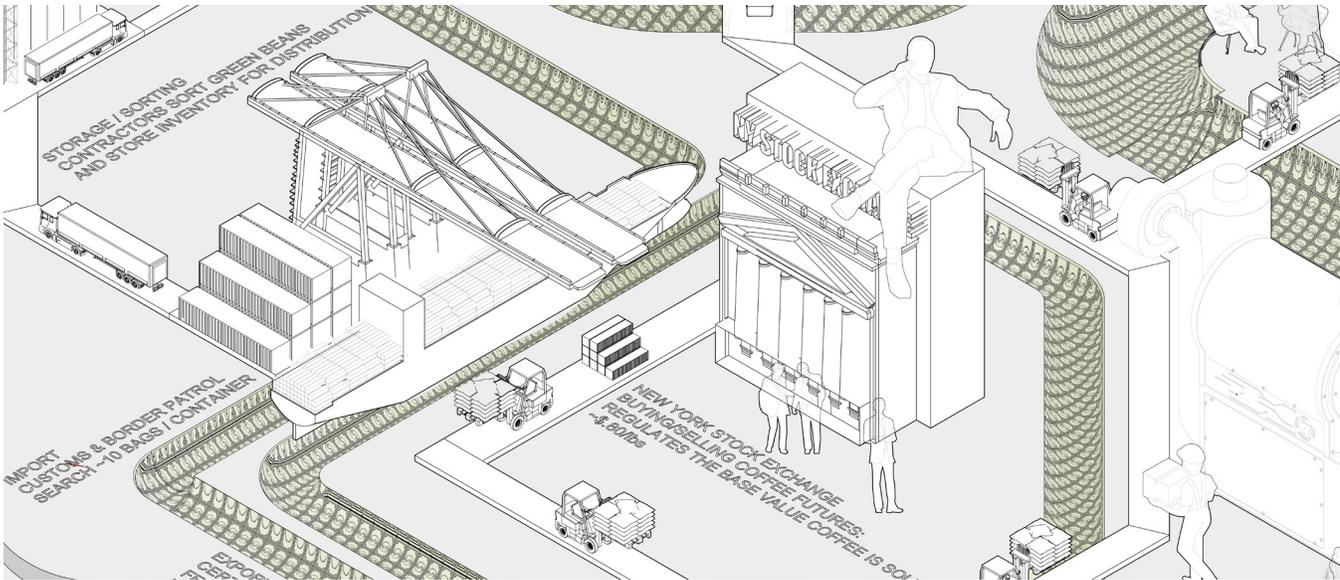


Figure 1.5 // Enlarged Coffee Supply Chain - Imports + Storage // By Ian + Team

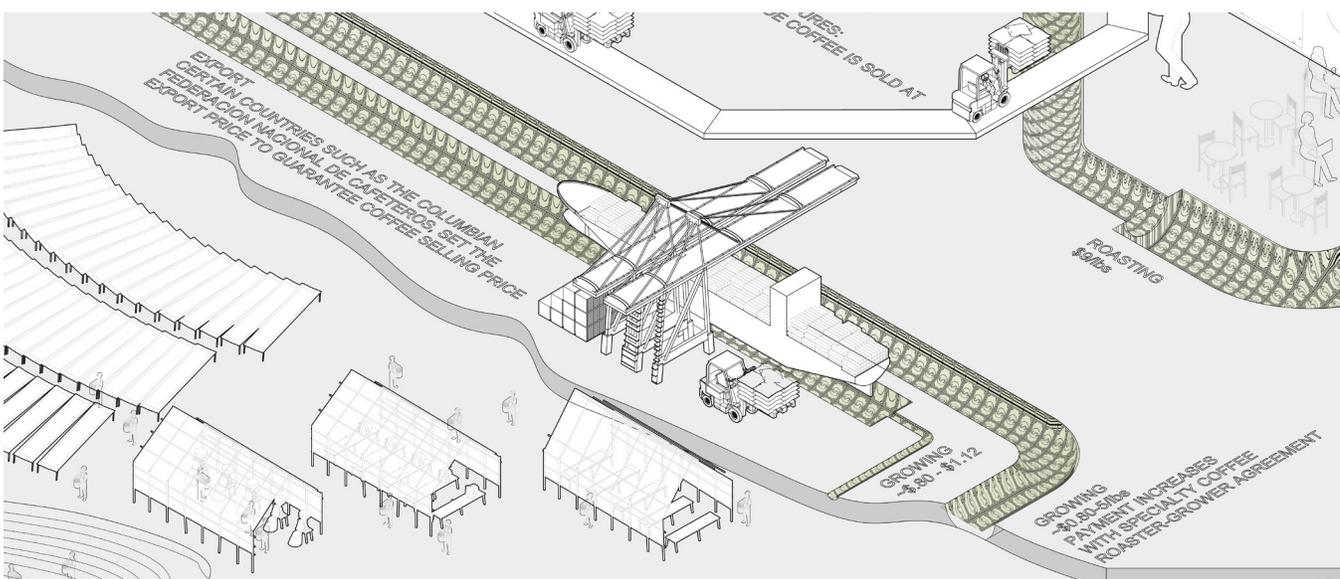
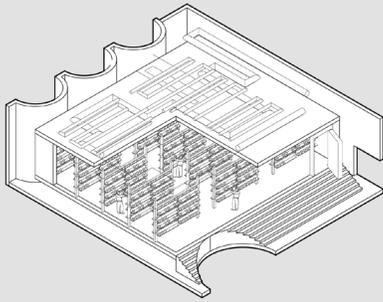
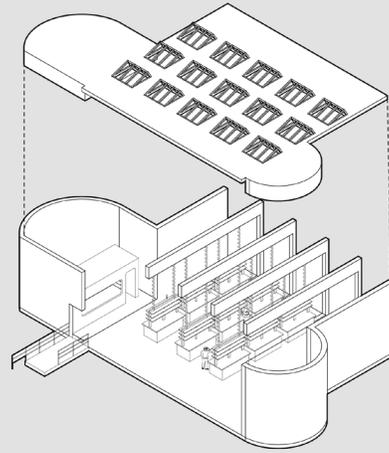


Figure 1.6 // Enlarged Coffee Supply Chain - Production // By Ian + Team



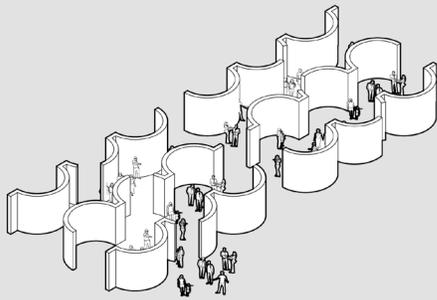
## BEAN BANK 2

To combat the impact of climate change on the coffee industry, the bean bank provides a frozen genetic inventory of the coffee



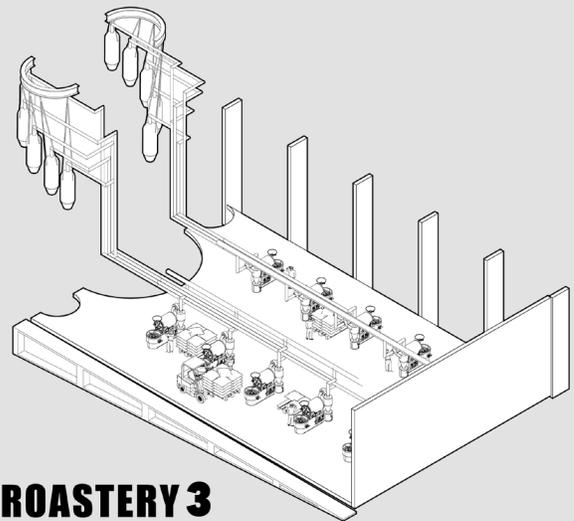
## COFFEE LAB

The lab enables scientists to broadly study climate change's impact on coffee, and curate the coffee bean bank



## FOOD HUB 1

The food hub provides stalls for local produce to be purchased, and pulls patrons towards the cafe and roasting experience



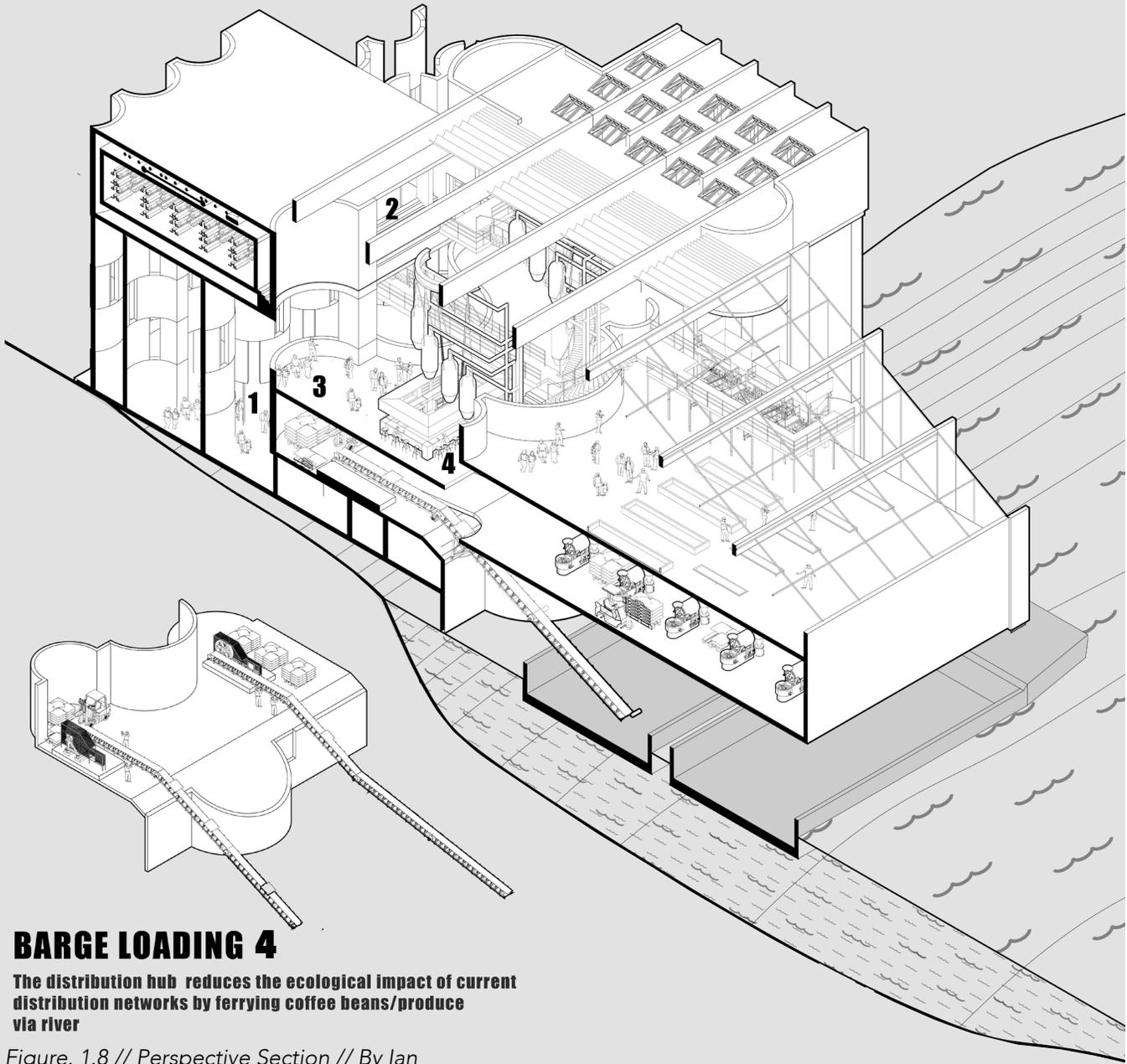
## ROASTERY 3

Beans are roasted on equipment leased to specialty coffee roasters, who in-turn buy green coffee beans from growers at prices higher than commodity coffee price set by the NYSE

Figure. 1.7 // Program Diagrams // By Ian

global context, the project began by mapping each step coffee takes from its growth to international shipping, roasting and finally consumption. (See Figure 1.3) Seen in the progression from the lower-left to the upper-right, our research identified two major pathways to Rochester which are based on the two bean types used in making coffee: Robusta and Arabica. Robusta is known as

commodity-based coffee as it is quicker to grow, can grow at a lower altitude, is cheap and doesn't taste very good. To reduce its harsher flavor, Robusta is often mixed with its higher-quality sibling, Arabica, which grows at a higher altitude and is more expensive with a delicious taste.<sup>1</sup> While a Robusta blend is known as commodity coffee, unmixed Arabica is known as specialty coffee and all



## BARGE LOADING 4

The distribution hub reduces the ecological impact of current distribution networks by ferrying coffee beans/produce via river

Figure. 1.8 // Perspective Section // By Ian

the existing Rochester café's engaged with the cultural production serve this higher quality bean. Aside from a different flavor profile, mapping the infrastructure of coffee reveals a very different distribution of revenue between the commodity and specialty coffee. Seen in Figure 1.3 as the green cash-flow river starting at the consumer's purchase in the upper right to the farmer's revenue in the bottom left,

commodity coffee passes along roughly \$3.88 less revenue to the growers per pound than specialty coffee.<sup>2</sup> For growers operating on very thin margins in economically depressed regions of South America and Africa, this exposes the farmer to most of the risk associated with unexpected weather and the uncertainty of the coffee futures market, which the farmer has no say in.

For most culturally-generative Rochester coffee establishments, an important component in attracting customers is drawing them into the process of how coffee is made and communicating that their coffee is equitably sourced. Exposing the inequalities of commodity-based coffee leaves consumers with a taste in the mouth that is even worse than plain Robusta, and craft-coffee establishments brand themselves with high direct-from-supplier standards to combat this. Using Meadow's infrastructural assessment, the promotion of specialty coffee due to its more equitable distribution of revenue creates a "gain around driving positive feedback loops".<sup>3</sup> To create a new architectural project that was embedded in the Rochester coffee scene, our team amplified this positive feedback loop through the creation of a co-op roastery with a direct supply chain to grow

co-ops and an immersive coffee production/consumption experience that would inspire Rochester-ites of the holistic process behind their communal coffee rituals. (See Figure 1.7 for program, Figure 1.8 for Building Section, Figure 1.9-1.11 for Experiential Renders)

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1 International Trade Centre. "The Coffee Exporter's Guide: Third Edition" Geneva, Switzerland: International Trade Centre, 2011. P. 19

2 International Trade Centre. "The Coffee Exporter's Guide: Third Edition" Geneva, Switzerland: International Trade Centre, 2011.

3 Meadows, Donell. *Leverage Points: Places to Intervene in a System*. Hartland: The Sustainability Institute. 1999. P.3



Figure. 1.9 // Entrance Render // Model by Ian, Render by Team



Figure. 1.10 // Coffee Bar // Model by Ian, Render by Team

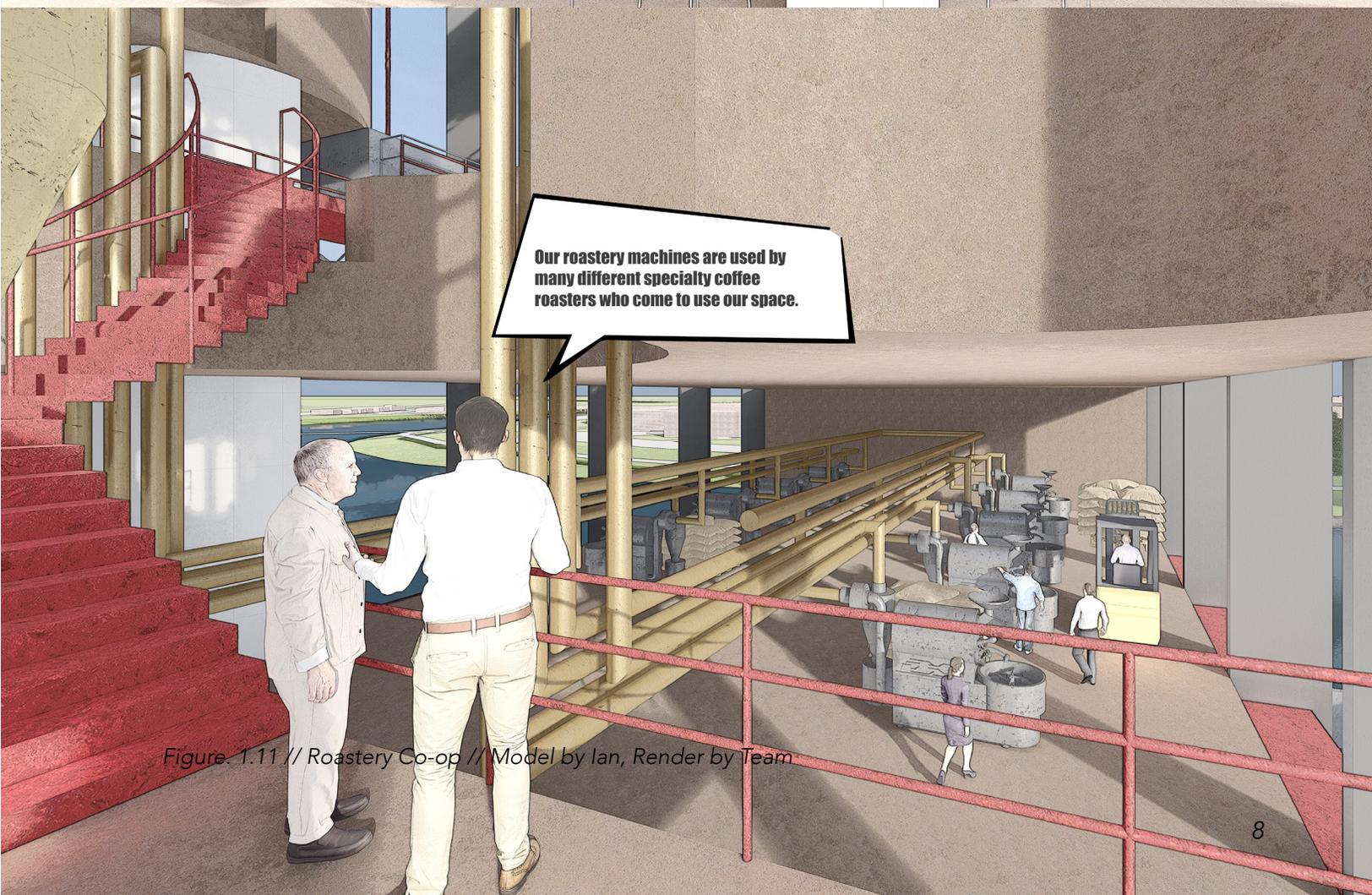


Figure. 1.11 // Roastery Co-op // Model by Ian, Render by Team

# Atmospheres of Collective Memory

Research what constitutes local collective memory and identify how architecture can respond to, and further, its formation through the creation of an atmosphere.

*This methodology was developed through the Architecture+Discourse studio module of ARCH 7111, led by Associate Professor Jeremy Foster. The example project was created with a group of MS AAD students: Po-Yu Chung, Vesela Petrova, and myself. Graphics are done by me unless otherwise noted.*

Architecture that is experienced by many people participates in the formation and regeneration of collective memory. Collective memory is an amalgamation of individual memories that through corporate events, memorials, and everyday habits begin to weave a social remembrance of a group's identity. Collective memory is extremely powerful as it shapes that way a society experiences and perceives events emphasizing certain values in that society. Architecture's role in this process is important as it acts like a seed of crystallization in the supersaturated milieu of society. Built-space bridges the gap between ideas and the physical world to manifest emotions into communal action. Understanding what constitutes a locale's collective memory empowers a design team to develop architecture that is grounded in its place.

As an example of this, Shanti Sumartojo documents architecture's power in shaping collective memory through

her auto-ethnography of the Australian commemoration event Anzac Day. (see Figure 2.1) Anzac Day, an annual remembrance of Australians who died on April 25, 1915 at the battle of Gallipoli, has become a nationally-unifying ceremony that has developed the Australian concept of "mateship" into a value to "define national behavior and outlook".<sup>1</sup> In the weeks leading up to April 25, news outlets

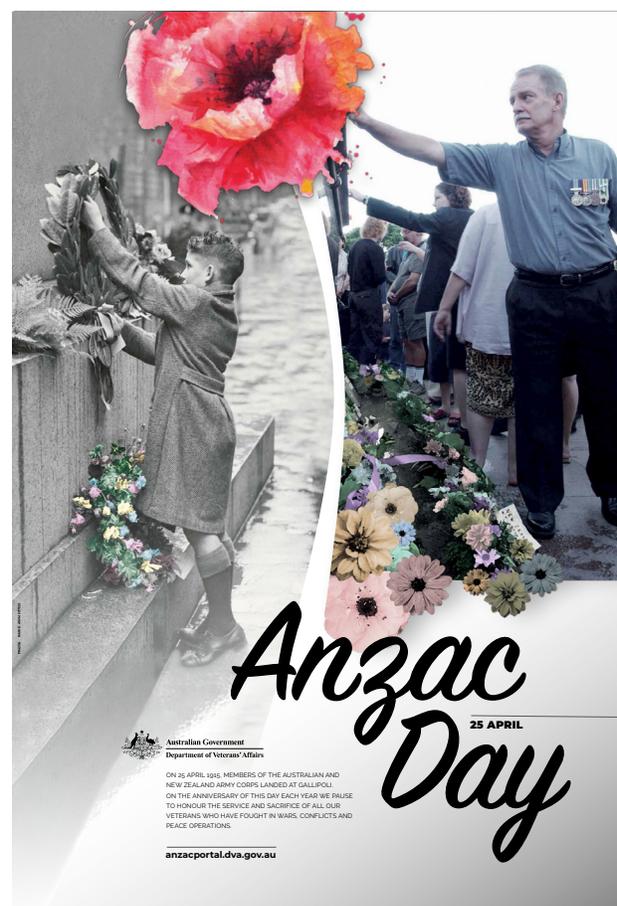


Figure 2.1 // Anzac Day Poster // Department of Veterans' Affairs 2021. "Anzac Day Posters 2021." Accessed December 4, 2021. <https://anzacportal.dva.gov.au/resources/anzac-day-posters-2021>

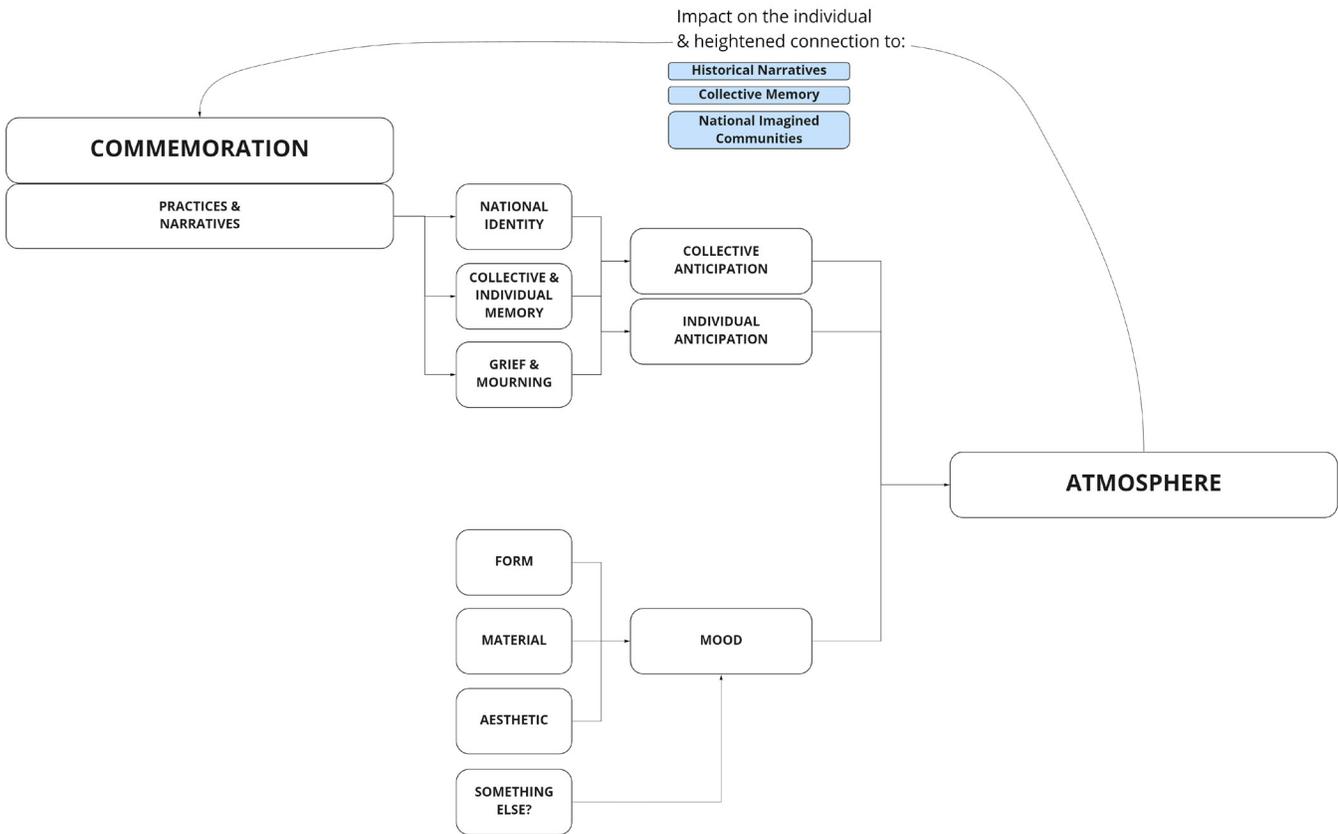


Figure. 2.2 // Formation of Atmosphere Diagram // By Ian

and radio stations prepare the public with a series of veteran interviews and talk-shows that highlight the events of the actual ceremony. This public build-up adds to individuals' memories of their previous Anzac experiences to create both individual and collective anticipation of the next memorial event. On the day of the memorial, a massive flock of people arise very early in the morning to arrive

at the Australian War Memorial for a dawn service. (See Figure 2.3) Central to Sumartojo's experience of the Anzac Dawn ceremony was the formation of what she terms "atmosphere" that becomes a physical manifestation of the public's remembrance of the Australian soldiers who died in the Battle of Gallipoli.<sup>2</sup> The atmosphere becomes a unification of the anticipation of the event with the physical



Figure 2.3 // Anzac Day Dawn Ceremony // Australian War Memorial. "2020 Dawn Service" Accessed December 4, 2021. <https://www.awm.gov.au/commemoration/anzac-day/dawn-service>

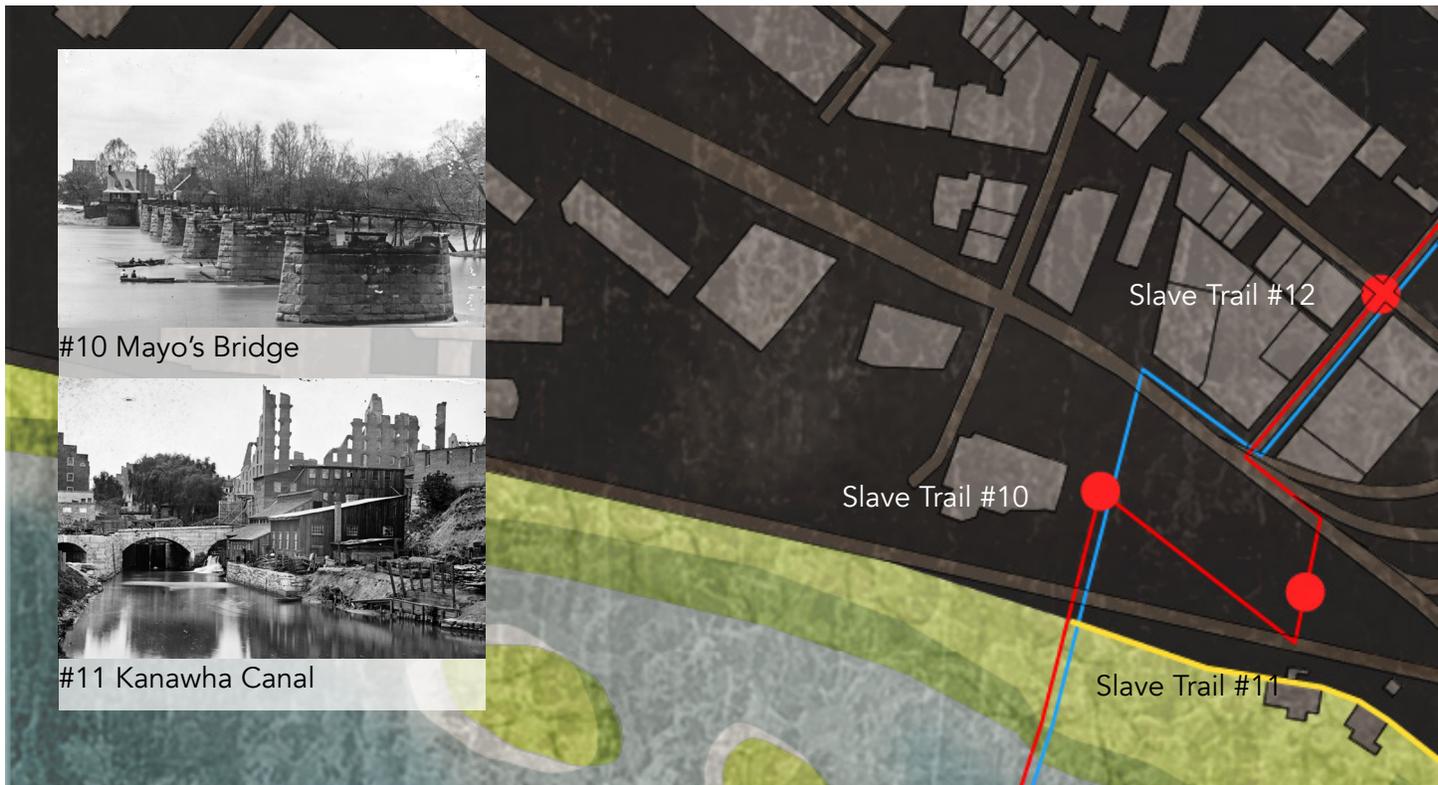


Figure. 2.4 // Map of Slave Memorial Trail and Site Location // By Ian + Team

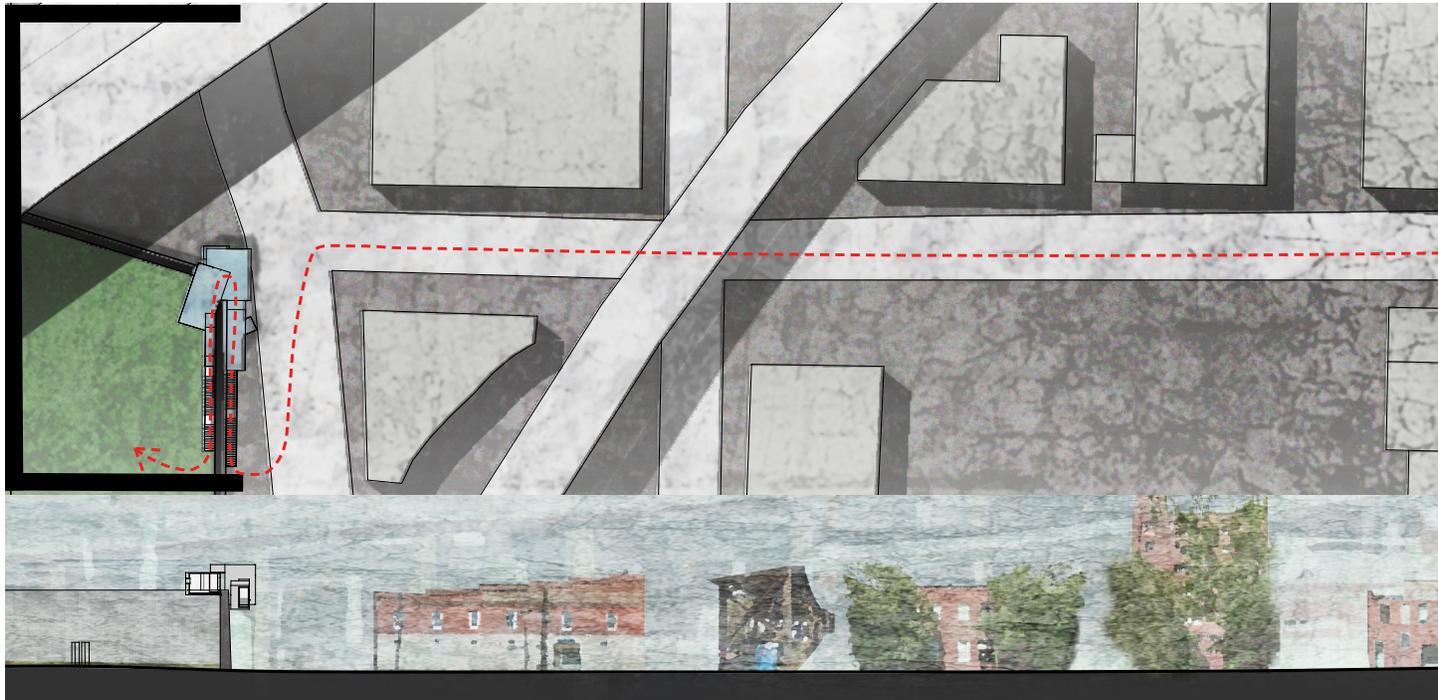
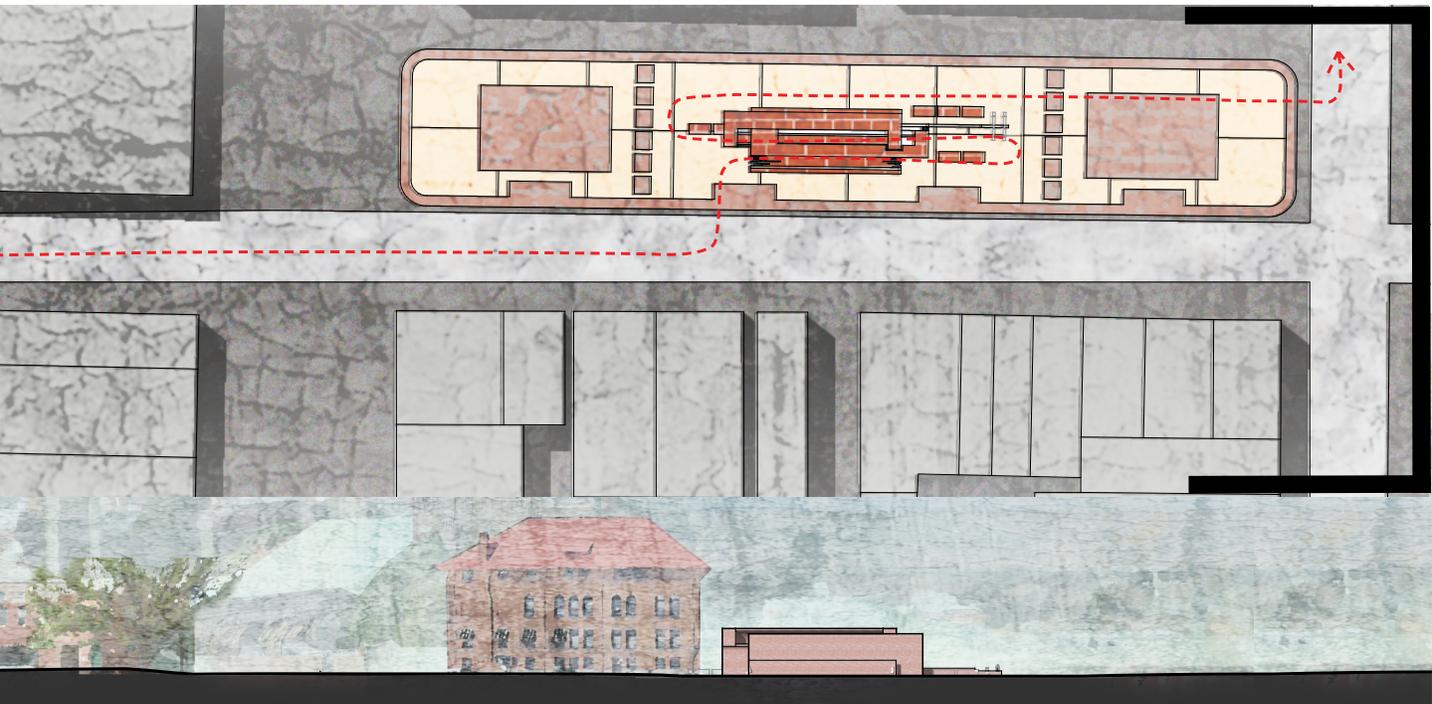


Figure. 2.5 // Site Plan + Site Section // By Ian

space of the Australian War Memorial and generates an emotionally-laden moment for all that attend. (See Figure 2.2) The experience of this charged moment draws the participants back the following year and entices larger

crowds to participate in future events. A mood created by the architectural form, materiality, and aesthetics combines with the memories and hype to create an atmosphere that represents the lived-reality of those



in attendance. This atmosphere is at once defined by its context and defines its context. To probe how architecture can create a mood that leads to the formation of an atmosphere, our studio, led by Associate Professor Jeremy

Foster, engaged the atmosphere surrounding the re-purposing of the confederate statues in Richmond, VA as counter-monuments by the Black Lives Matter movement. Instead of acting on the confederate monuments

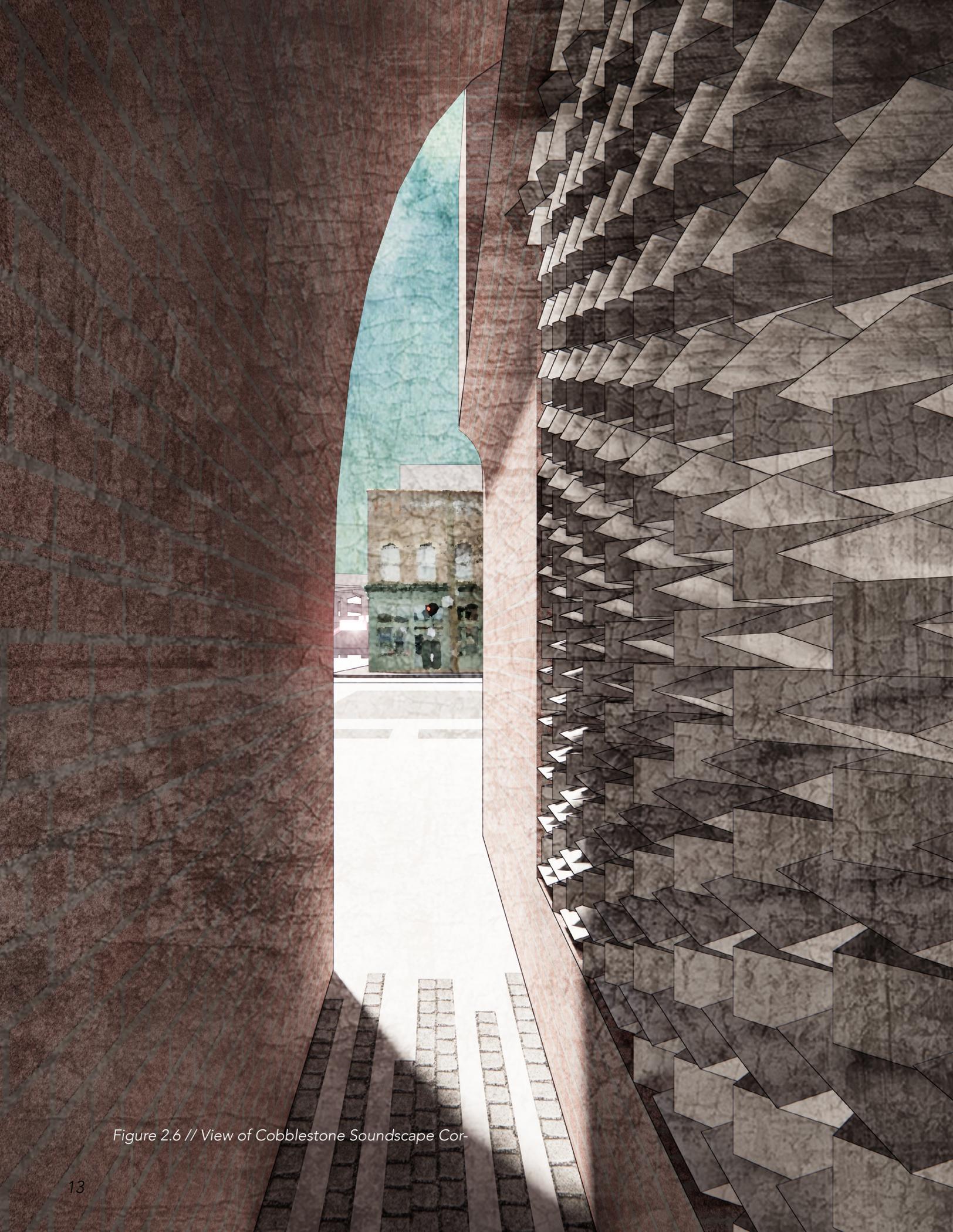


Figure 2.6 // View of Cobblestone Soundscape Cor-

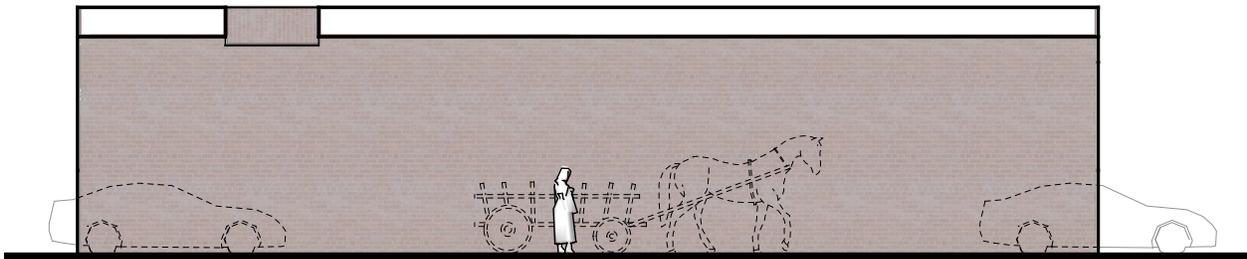


Figure 2.7 // Longitudinal Section Diagram // Soundscape

surrounded in contention, my team's approach was to amplify the excellent walking tour "Richmond Slave Tour" and audio-guide "Seeing the Scars of Slavery in the Natural Environment".<sup>3</sup> Beginning on the far side of the James River at the Manchester Docks, plaques with inscriptions and Bas reliefs draw a walker into the journey of the enslaved as they were force-marched from slave ships to the auction blocks. The walking tour is guided by a phone app with a voice-over from scholars explaining the experiences of the enslaved at specific spots in their journey.<sup>4</sup> (See Figure 2.4 for spots #10-#14 and the site of our proposal) As an extension to the Richmond Slave Tour and inspired by the audio guide app, our proposal created spaces that bring attention to the relatively-hidden tour and immerse visitors in an acoustic soundscape. As architecture is experienced in a state of distraction, these structures do not project a history to be learned but a history to be experienced. In this way the project welcomes a visitor's current assumptions and grows their

understanding of Richmond's history to be more holistic. After stop 14 at Odd Fellows Hall (see Figure 2.4) a walker would proceed to the farmers market on the other side of the Richmond Main Street Train Station. There they would be met by a structure that houses farmers market stalls connected by soundscape corridors. Within each corridor, the moving sounds around the market are silenced and replaced by period-specific sounds. Thus, a moving car would become a horse drawn wagon, transporting your perception of what lies beyond the corridor into the past. (See Figure 2.7) A change in materiality on the ground would amplify the transposed sound as concrete sidewalk gives way to cobblestone or a corduroy road. (See Figure 2.8 and 2.9) After experiencing the market soundscape, the Slave Memorial Trail would extend to its new end at the Wall Soundscape Ladder. The Ladder connects the existing urban boundary to the water's edge-currently divorced by an unscalable flood wall. (See Figure 2.12)

## GRAVEL

The majority of roads consisted of mud and gravel aggregate which emit a strong crunching sound.



## CORDUROY ROAD

The Mayo Island bridge, used to march the enslaved in/out of Richmond towards the Manchester docks, along with several roads in the 1700-1820's were constructed out of adjoining wooden logs. Carts with wooden wheels bounced and creaked along these roads.



## COBBLESTONE

A typical building material used for 17<sup>th</sup>-18<sup>th</sup> century streets associated with Richmond and the acoustic ambiance of the time. Horse drawn-cart and pedestrian traffic create a distinctive clop-clop echo on irregular stone streets.



Figure. 2.8 // Paver Materials // By Ian

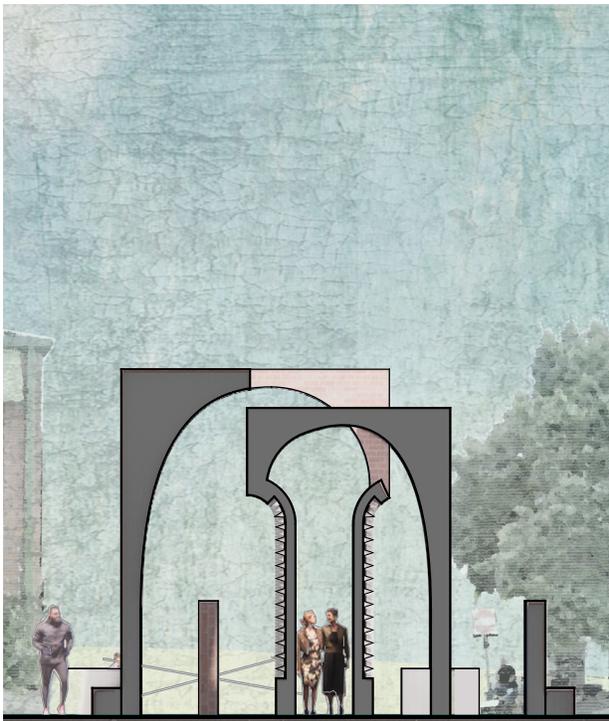


Figure. 2.10 // Transverse Section // By Ian

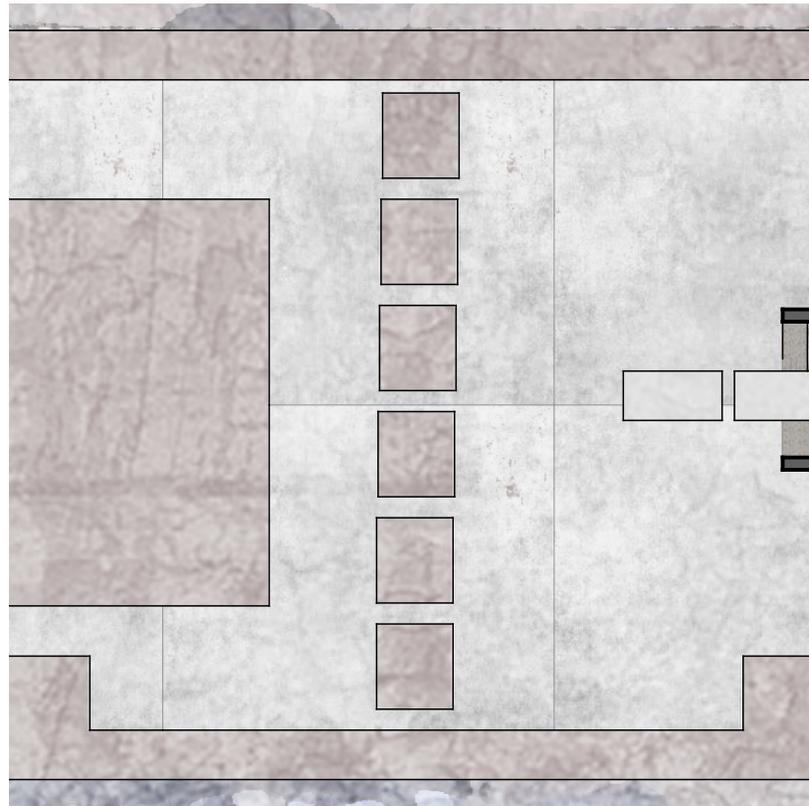


Figure 2.9 // Plan of Paver Material // By Ian

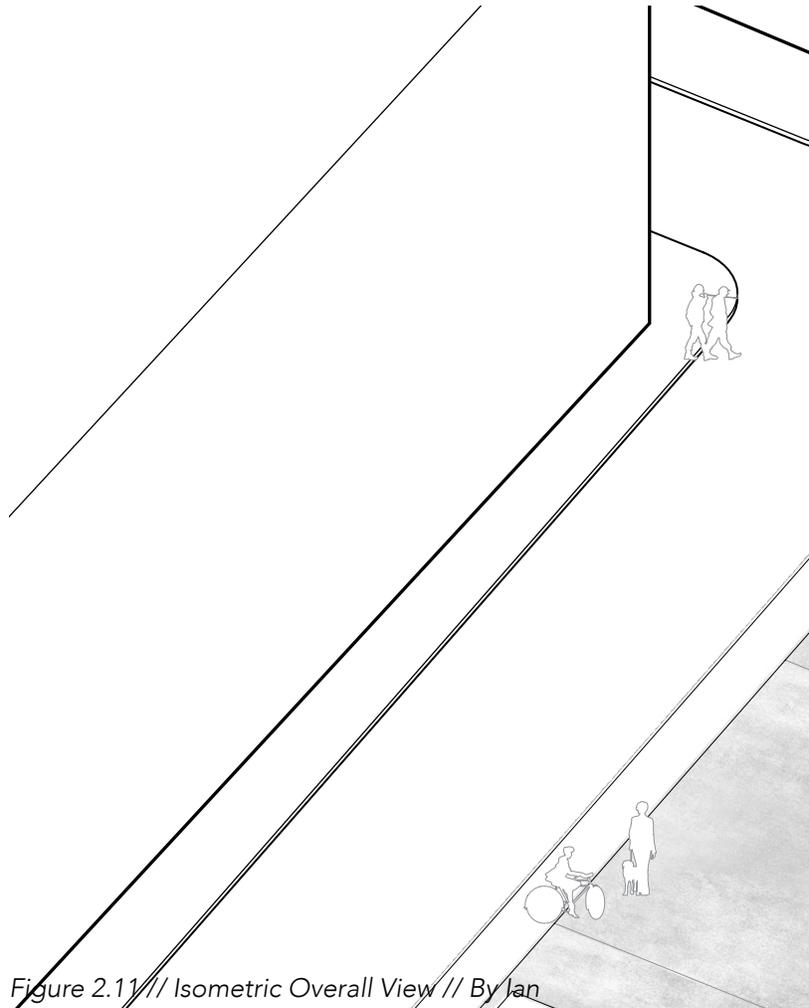
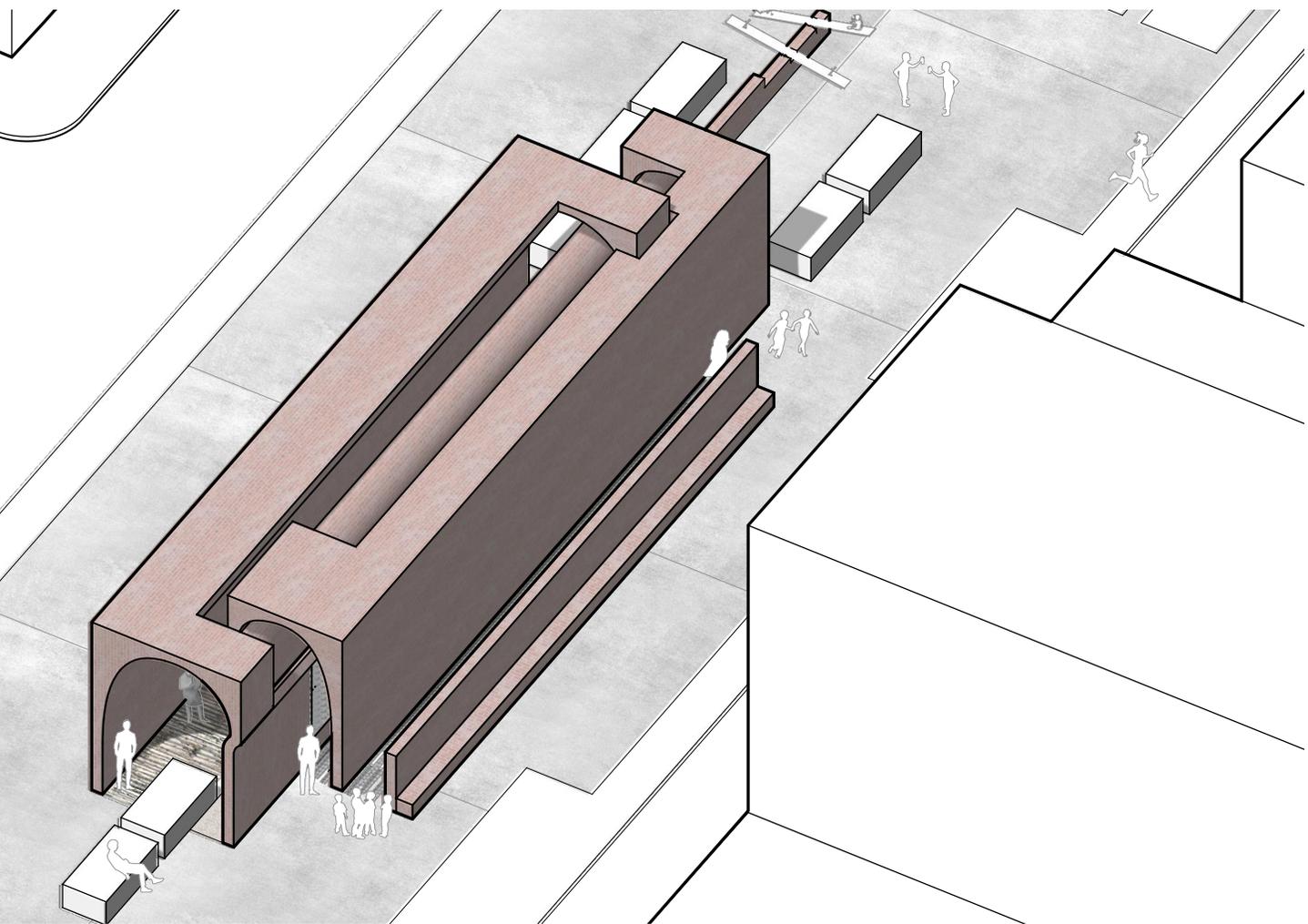
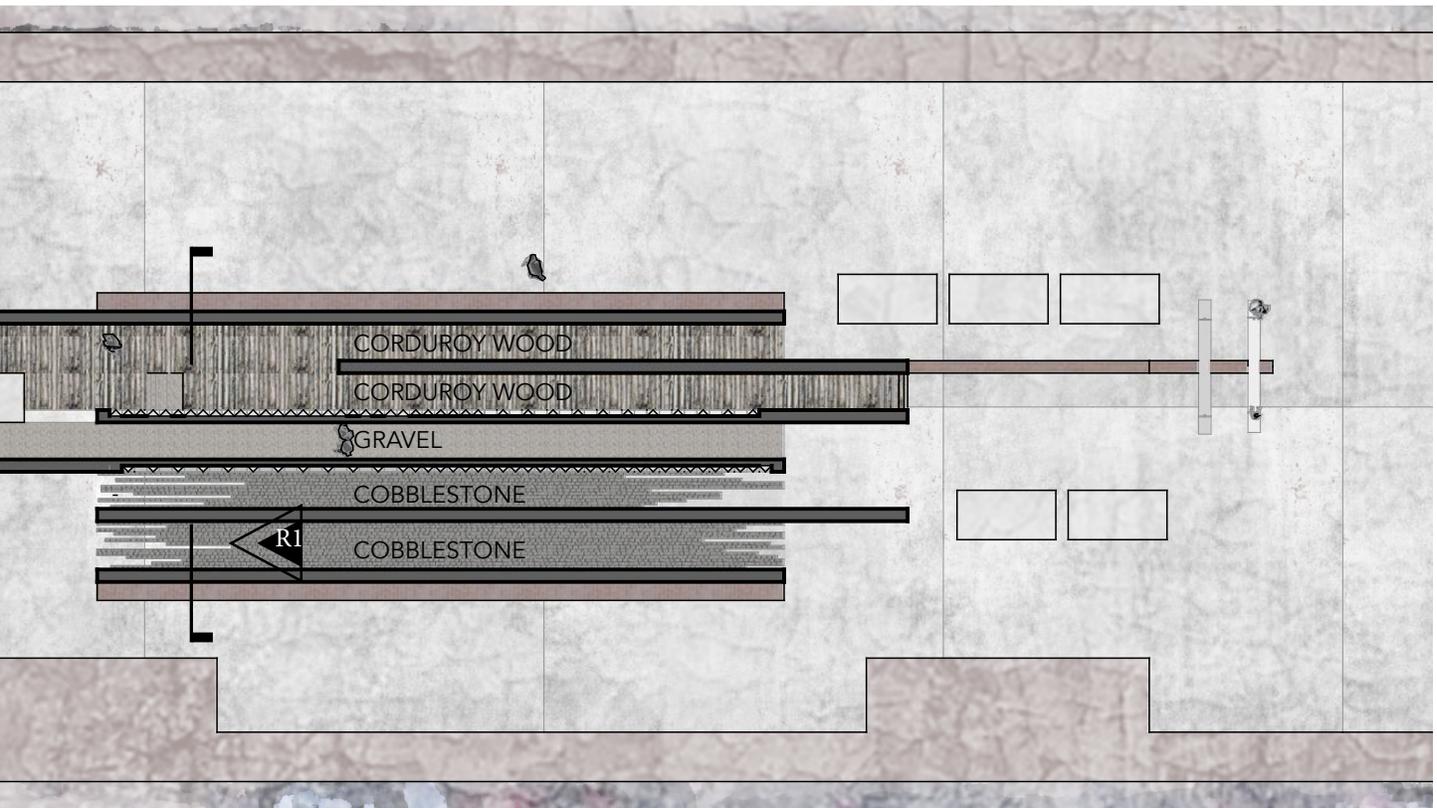


Figure 2.11 // Isometric Overall View // By Ian



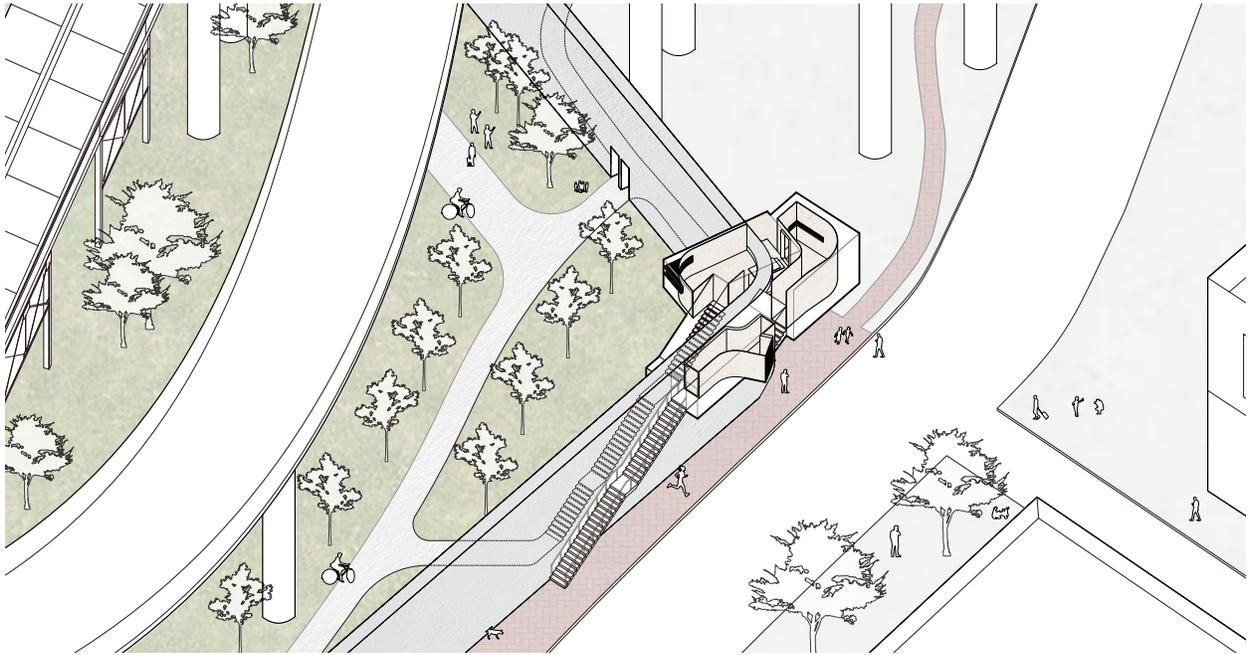


Figure. 2.12 // Wall Soundscape Ladder Isometric // By team

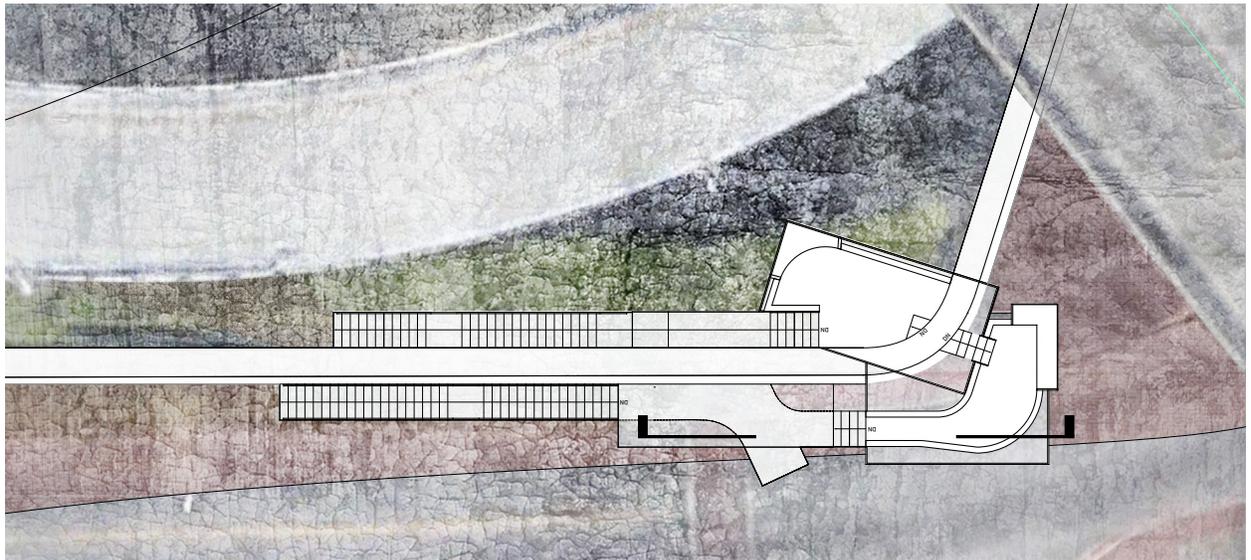


Figure. 2.13 // Wall Soundscape Ladder Plan // By team

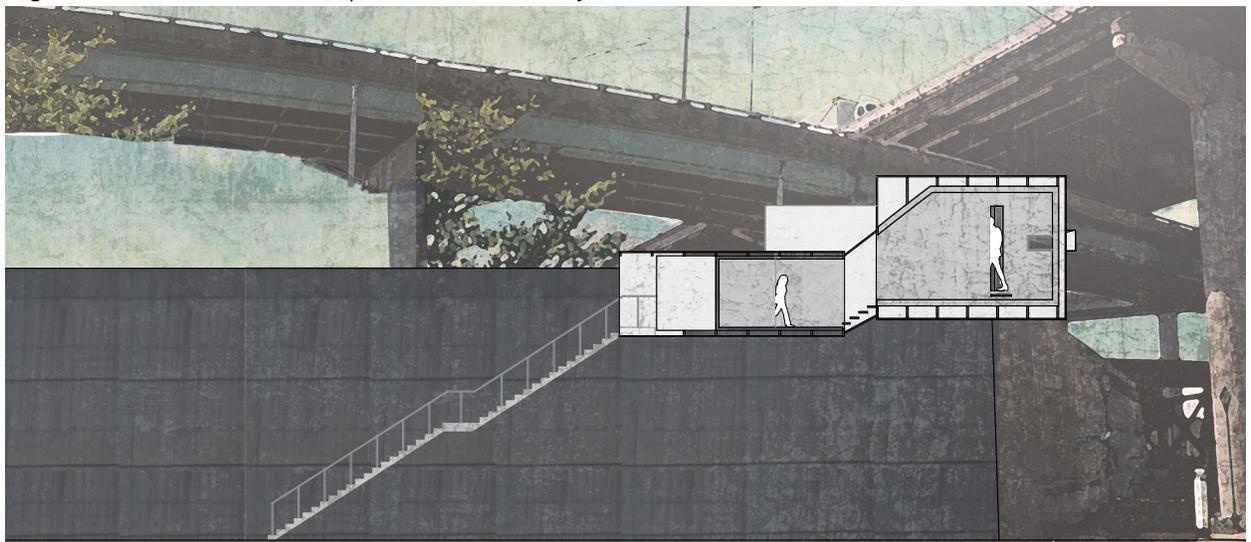


Figure. 2.14 // Wall Soundscape Ladder Section // By team



Figure. 2.15 // Soundscape Ladder Interior // By Ian

Similar to the Market Soundscape, the Wall Soundscape Ladder isolates specific views of the city and replaces existing sounds with their historical counterparts. With a view of the freeway, the sounds of cars transition to carts on a corduroy bridge. With a view of the freight-rail overpass, the sounds of diesel trains give way to the creaking of wooden sailing ships on the James River. Through the transposition of existing soundscapes with historical ones, a visitor's memory is expanded to feel the evolution of the place. Unlike monuments of individuals that catalyze polarizing opinions, the soundscape invites visitors with their own assumptions but provides new layers of affective emotional experiences that were felt by the enslaved in their journey through historical Richmond.

Through the modified individual memory and creation of an architectural mood, an atmosphere is created that is both embedded in the history of Richmond and expands the city's collective memory of enslaved persons.

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1 Sumartojo, Shanti. *Commemorative Atmospheres: memorial sites, collective events and the experience of national identity.* London: Royal Geographical Society. 2016. P. 2

2 Sumartojo, Shanti. *Commemorative Atmospheres: memorial sites, collective events and the experience of national identity.* London: Royal Geographical Society. 2016. P. 1

3 Virginia is for Lovers. "Central Virginia: Richmond Slave Trail" Accessed December 4, 2021. <https://www.virginia.org/listing/richmond-slave-trail/226/>

4 White, Ralph R. *Seeing the Scars of Slavery in the Natural Environment* Richmond: Friends of the James River Park. Original edition 2002, Revised 2019.

# Genre

Research the genre indices of an architectural project to hand the designer new tools to create pairings in a way that society is designed to digest.

*This methodology was developed through the Architectures of Genre seminar of ARCH 6308, led by Associate Professor Val Warke. Graphics are done by me unless otherwise noted.*

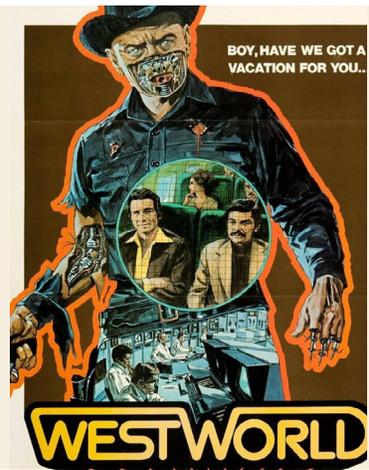
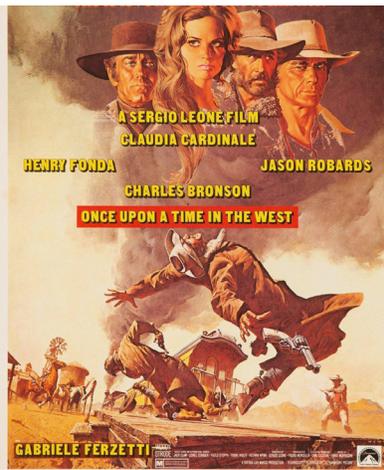
Today, people are programmed to imagine works of artistic production through the classifying role of genre. Literature is organized in the bookstore by genre and our likes and dislikes are curated to this method of organization. When going to a bookstore, many people gravitate to certain aisles where their preferred genre resides. Because of their appreciation for previous books that were purchased from that aisle they are more willing to read an unknown book that is suggested in the same genre category. Thus, the categories of genre shape the public's desire for certain types of literature, and new literature is produced with this in mind.

Music is curated in a similar way and is understood by its different characteristics that lead specific audiences to expect certain sounds. The audience's expectation is important to the formation of the sound as it leads future musical production to engage with similar sounds that appeal to that audience. As the musical artist is also an audience member, enjoying certain songs produced in relation to the bounds of a genre

category lead to new music that reproduces, with slight modifications, that genre. While record shops, the musical equivalent of bookstores, become less prevalent, the online album distribution and streaming platforms organize music in genre categories which shape a listener's profile and result in similar-sounding music to be suggested for their next listen.

Film is another artistic production that is similarly catalogued, and a film genre is defined through a series of works that abide within the flexible bounds of characteristics that constitute that genre. It is possible to read the lineage of a genre through a serialized list of titles that repeat characteristics with slight modifications. Genre gets its power as it reflects the characteristics that define how humans communicate with one another. The intentional, and sometimes unintentional, tweaking of certain characteristics in our communication lead to new ideas which become the seeds of new genres.

To understand the basis of human communication as a foundation of genre, it is useful to study the work of Bakhtin who, as a literary theorist, categorizes the way in which humans communicate through what



Is this you...or are YOU you?



**FUTUREWORLD**

where you can't tell the mortals from the machines

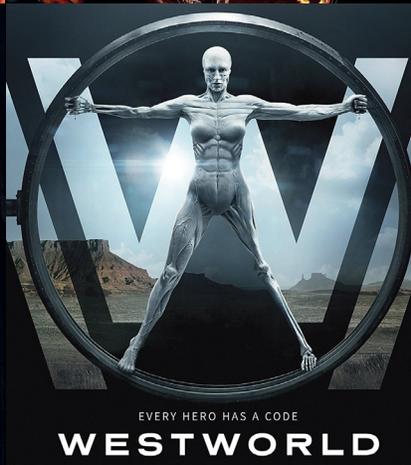
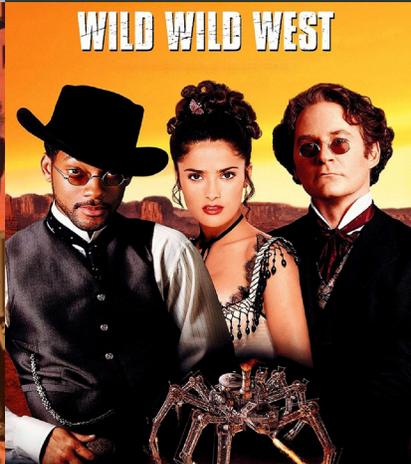
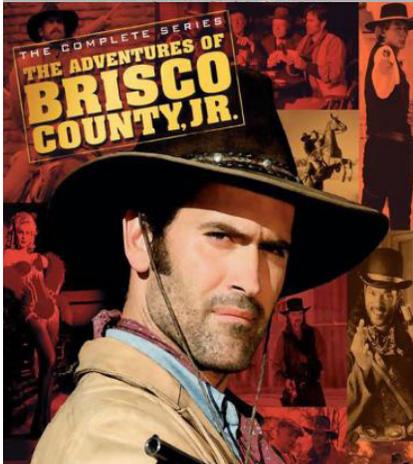
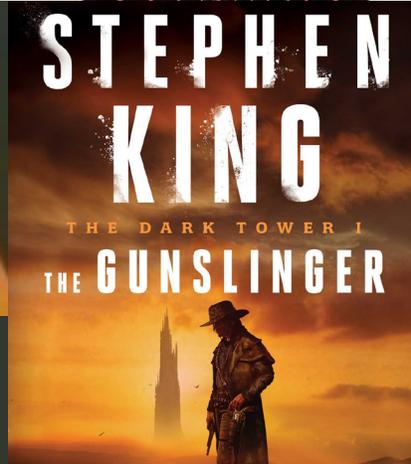


Figure 3.1 // Western Robots Sub-Genre Progression // By Ian



**Story Structure:**

*"the premise of the outsider hero who must battle his way through the ranks of the enemy until he faces a stand-off with the villain, whom he resembles in many ways and with whom he has formed a special bond of respect."*

*- Martin Flanagan*

**Chronotropic Types:**

*Frontier/Wild imagery, danger lurks amidst normal activities. Sets the stage for villain characters to control with force*

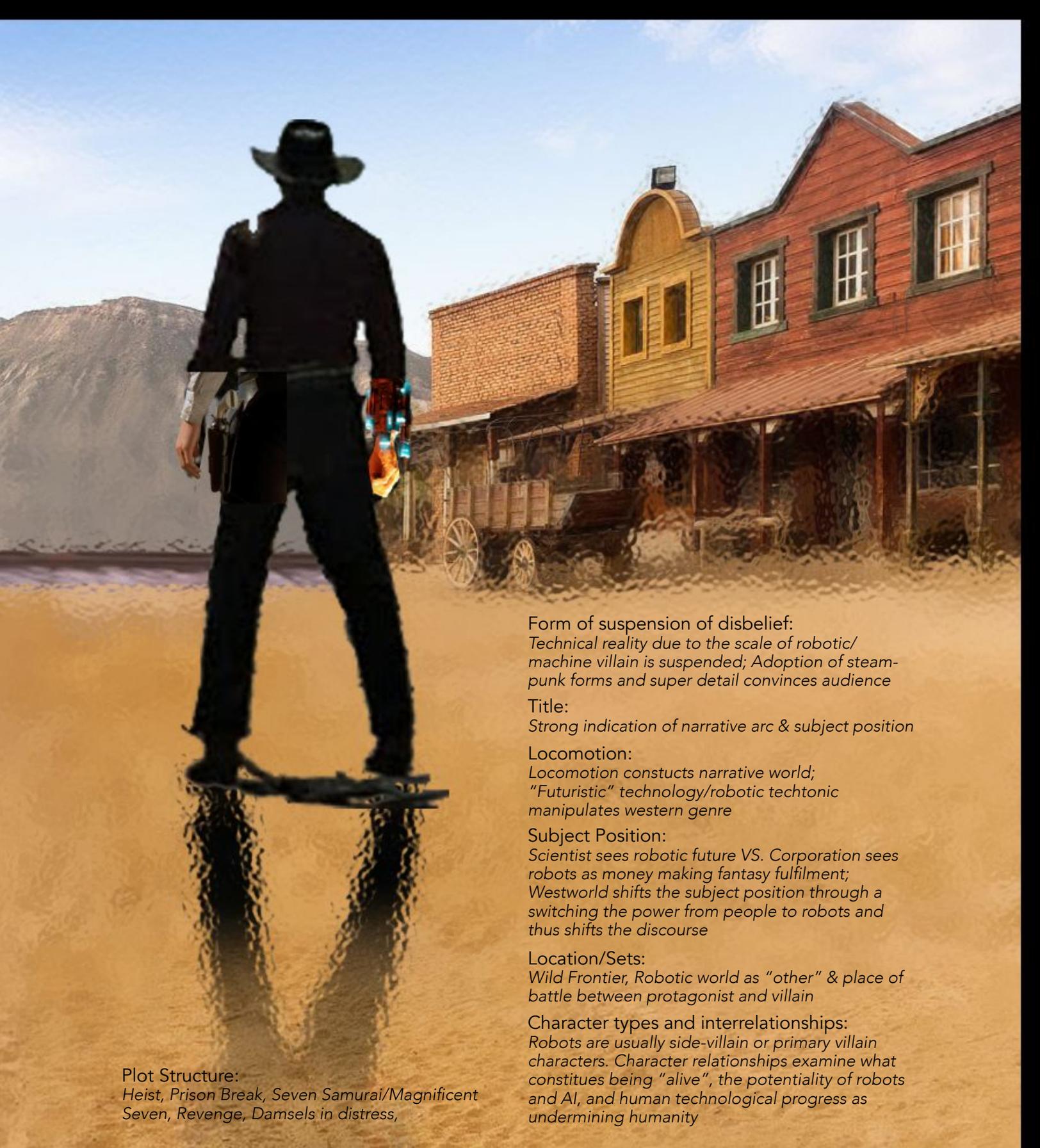
**Mimesis:**

*Use of the modern metropolis as robotic world hero must fight against*

**Weaponry:**

*Personal hand cannons; Robots have enhanced weaponlike bodies*

Figure 3.2 // Summary-Image of Western Robots sub-genre produced by collaged elements from each film // By Ian



Plot Structure:  
Heist, Prison Break, Seven Samurai/Magnificent Seven, Revenge, Damsels in distress,

Form of suspension of disbelief:  
*Technical reality due to the scale of robotic/machine villain is suspended; Adoption of steam-punk forms and super detail convinces audience*

Title:  
*Strong indication of narrative arc & subject position*

Locomotion:  
*Locomotion constructs narrative world; "Futuristic" technology/robotic techtonic manipulates western genre*

Subject Position:  
*Scientist sees robotic future VS. Corporation sees robots as money making fantasy fulfilment; Westworld shifts the subject position through a switching the power from people to robots and thus shifts the discourse*

Location/Sets:  
*Wild Frontier, Robotic world as "other" & place of battle between protagonist and villain*

Character types and interrelationships:  
*Robots are usually side-villain or primary villain characters. Character relationships examine what constitutes being "alive", the potentiality of robots and AI, and human technological progress as undermining humanity*



Figure 3.3 // Frontier Data Center Built from Indices of the Western-Robot Sub-genre // By Ian

he terms an “utterance”.<sup>1</sup> An utterance is the basic speech unit between two persons, an addressor and addressee, which goes through three stages to move from the speaker to the listener. The first stage of the utterance, as the addressor prepares to communicate to the addressee, is to imagine who her addressee is. This imaginary and projected image of the addressee is built from what the addressor knows about the listener and shapes the utterance accordingly. As an example, imagine the differences in how an addressor would alter their utterance to communicate an idea to an adult versus a toddler. The second step is the actual speech act, and Bakhtin defines a series of categories by which the utterance is constructed. These foundational categories

give rise to the indices of genre and are: context, social relations, values, perception system, potential actions, chronotope, relevant tone, heteroglossia, and negotiate purposes. To define the unfamiliar terms, chronotope is the specific space and time that the utterance alludes to,<sup>2</sup> and heteroglossia is the range of utterance variety as a result of social tension.<sup>3</sup> The third step is the listener’s active-imagined understanding of who the addressor is, which acts as a filter through which the utterance is heard, processed, and understood.<sup>4</sup> Bakhtin’s analysis of speech communication gives a concrete launching point to engage with specific characteristics or indices of genre.

Professor Val Warke builds off Bakhtin’s

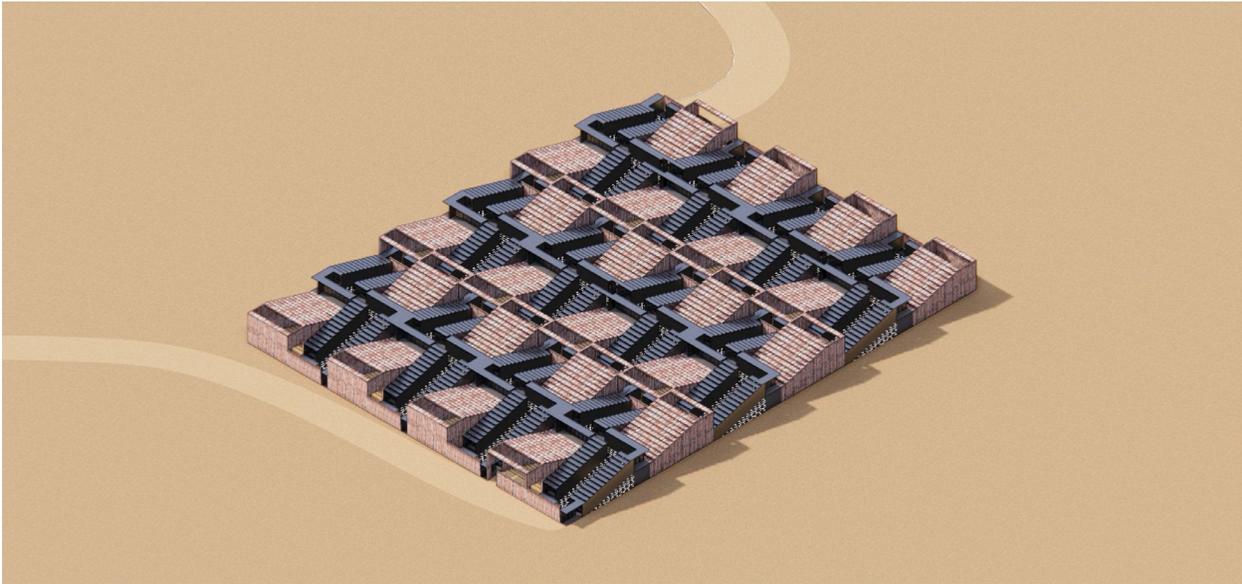


Figure 3.4 // Data Center Axonometric // By Ian



Figure 3.5 // Data Center Maintenance Maze // By Ian

structures and examines how the literary structures that have been adapted to frame the genres of film provide a way of evaluating and designing architecture. Expanding beyond the list Bakhtin developed, Warke suggests the following indices formulate the genre of film: Story structure, plot structure, subject position, location/sets, character types and interrelationships, locomotion, title, form

of suspension of disbelief, weaponry, and mimesis.<sup>5</sup> With many similarities in the viewer's experience between film and architecture, Warke posits that evaluating architecture through the lens of genre reveals that the evolution of architecture's program and form is similar to the progression of a genre through a series of films. It is not hard to see the parallels when thinking about the architectural

tropes of “health clubs, organic food markets, amusement piers, biker-bars, mirror-glassed office buildings, [and] exotically-trussed sports venues”.<sup>6</sup> An image immediately pops into one’s mind when thinking of these programs as consistent forms that communicate the intended programmatic use. New construction that engages with this consistent formal typology reinforces those forms as belonging to that particular program. The continued synergy between a formal typology and program type perpetuates and expands that genre of architecture.

Evaluating architecture through the lens of genre is helpful in identifying how the general public perceives it, and suggests implementing techniques used to modify film genres in the architectural process to create

spaces that are embedded in local culture. As an example of implementing genre techniques into the design process, I have developed a datacenter building that is formally constructed from the western subgenre of western robots. Beginning with Gene Autry’s “The Phantom Empire” film in which villain robots occupied a high-tech universe parallel to a western frontier town, this subgenre has continued to advance through today, with re-boots in the shows Westworld and Disney’s Star Wars the Mandalorian. (See Figure 3.1) Extracting components of these films and shows, Figure 3.2 shows how a collaged image generated from all these stories creates a readily-identifiable image that summarizes the indices of the robot western sub-genre. By mapping the indices



Figure 3.6 // Data Center Longitudinal Section - Parallel worlds in scissor stair form // By Ian

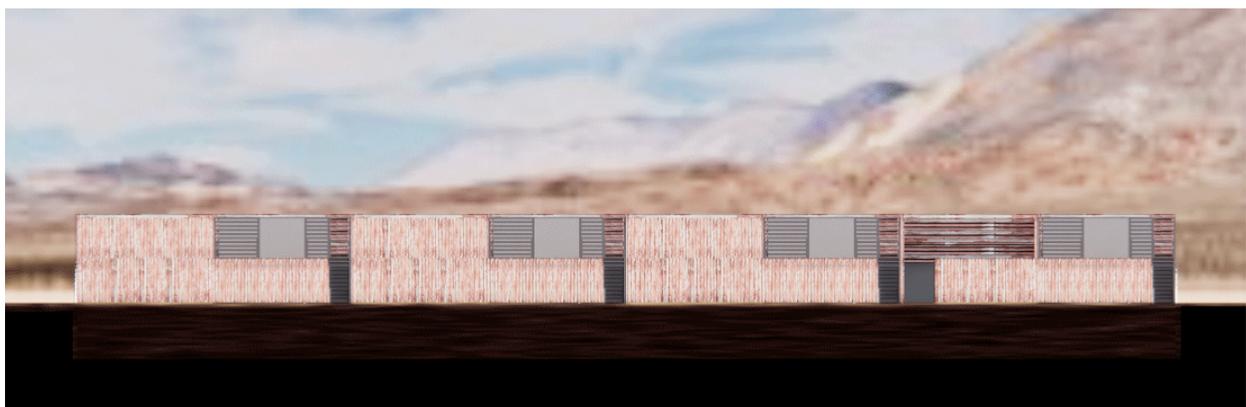


Figure 3.7 // Data Center Front Elevation // By Ian

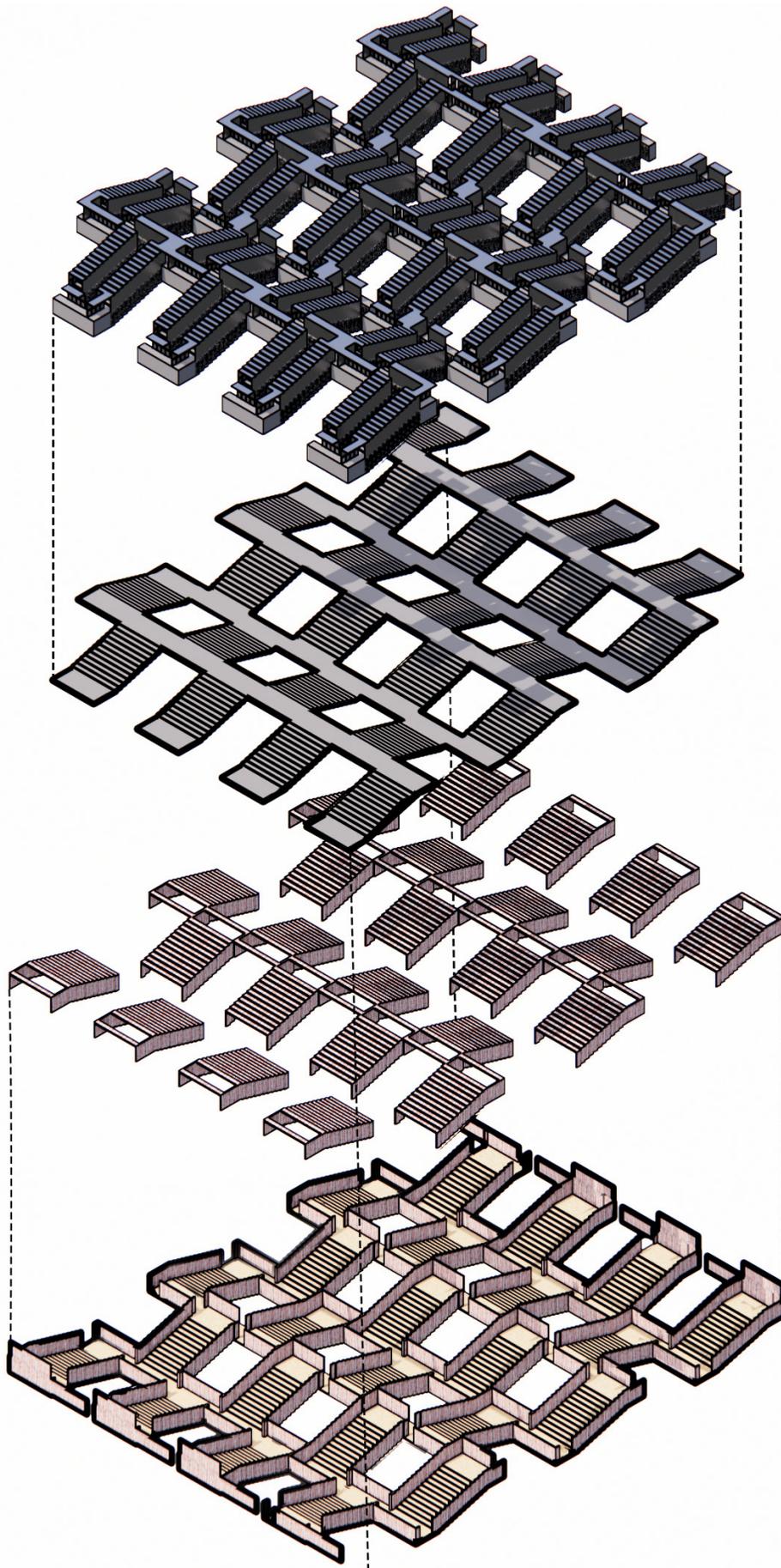


Figure 3.8 // Data Center Exploded Axonometric // By Ian

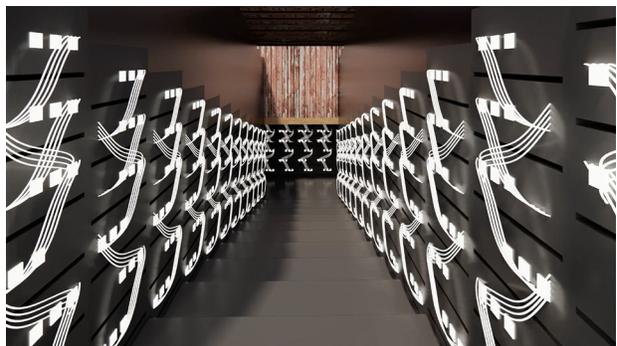
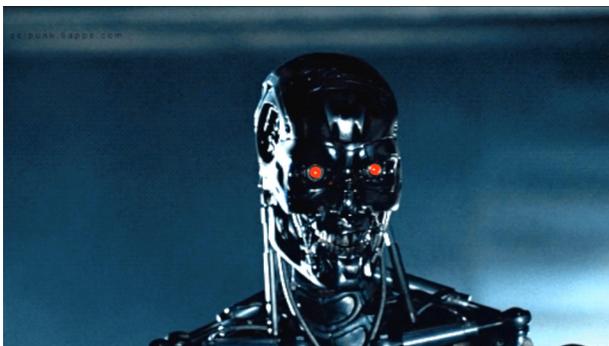
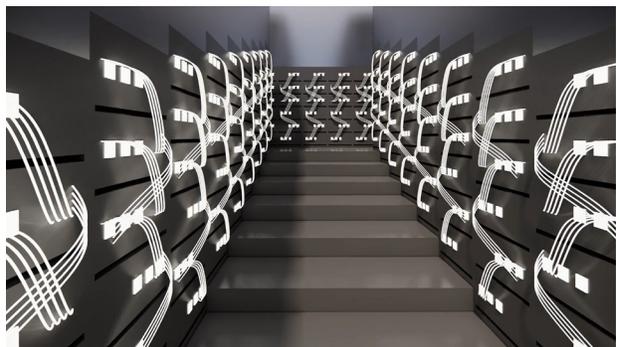
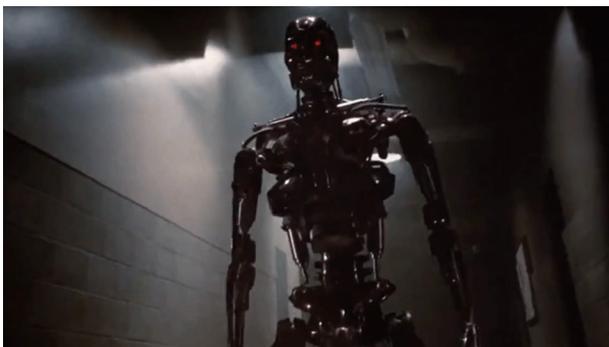


Figure 3.9 // Data Center Maze Movie stills - using Western-Robot tropes to create a spatial story // By Ian

of this sub-genre to a data-center program, an architectural language is created that is rooted in the robot-western and feels like a natural extension of that film's storyline. (See Figure 3.3 & 3.4) A frontier maintenance man would arrive to service the remote data center and enter through the human access portal to maze through the access tunnels. (See Figure 3.5) Modeled after a horizontal scissor stair, a parallel network of computer banks encloses a mechanical automaton permanently servicing the machines and spatially reflecting the recurring trope of the robot operating in an adjacent world to the frontier hero. These service passageways are woven together culminating in moments where the human and the machine may have chance encounters. (See Figure 3.8) To encapsulate how the architectural form becomes woven into the narrative by building off the sub-genre indices, a short film follows the journey of the human and parallel automaton through the maze-like data center. (See Figure 3.9)

Thinking about architecture through the lens of genre can be a generative tool for a design team working to embed a project in the cultural narrative of its locale and creatively expanding that culture. Perhaps there are two different genres that could be combined? Do new formal vocabularies create sub-genres that create applicable resonance to a place? How does a narrative or story's qualities

become foundational in the production of a projects form? Understanding the formal indices of architecture can incite unimagined forms that once constructed feel like natural extensions of a local context.

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1 Bakhtin, M.M. *Speech Genres & Other Late Essays: The Problem of Speech Genres*. Translation by Vern W. McGee. Austin: University of Texas Press. 1986. P. 71

2 Oxford Reference. "Overview: Chronotope." Oxford: Oxford University Press, 2021. Accessed December 5, 2021. <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095611483>

3 Oxford Reference. "Overview: heteroglossia." Oxford: Oxford University Press, 2021. Accessed December 5, 2021. <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095934670>

4 Bakhtin, M.M. *Speech Genres & Other Late Essays: The Problem of Speech Genres*. Translation by Vern W. McGee. Austin: University of Texas Press. 1986. P. 68

5 Warke, Val. "Generic Structure." Lecture given to ARCH 6308 at Cornell University, Ithaca NY, on March 3, 2021.

6 Warke, Val. "The Architectures of Genre: Syllabus" Ithaca: Cornell University. February 10, 2020. P.1

# Translating Works of Cultural Production

Research a work of cultural production, and translate the work to create architecture embedded in cultural practices.

*This methodology was developed through the Polis and Geography studio of ARCH 7111, led by Visiting Associate Professor Scott Ruff. Graphics are done by me unless otherwise noted.*

Translation is in some ways the underpinning of any act of architectural production, as all architects synthesize inspiration (context, previously-studied forms, conceptual images, stories, etc.), isolate elements of relevant value, and reformulate those values into new formal relationships. To root the practice of translation within a specific community and local context, this methodology investigates applying the process of translation to artifact(s) of cultural production important to communities in a local context. The natural danger with this approach is that a 'surface-level' translation can appropriate—in a negative and denigrating way—the customs and habits of the very community an architecture is trying to serve. Thus, this approach to deriving form is highly dependent on how embedded and intertwined a project is, not only with the artifact(s) of inspiration but the larger project which the artifact engages with. Ultimately, the ideas and precepts of the item should be as important in the translation process as the physical manifestation of the object itself.

To appropriately translate works of cultural production it is therefore important to align with the values and over-arching intent behind the community's formation and use of the artifact. The translation process must also move past a surface-level formal reading and embed the logics of the artifact into each scale of the architecture so that a space does not simply co-opt the 'image' of the artifact but becomes entwined with it. The first step in a design process that utilizes this methodology is to develop concurrent research projects examining the context of the project's site and the context around the translated item of cultural production. As an example of this process, the project *The Weave*, developed under the guidance of Professor Scott Ruff, translated the logics of Kente cloth into a community center serving the African American enclave in the 19th ward of Rochester, NY. Kente cloth was originally developed by the Asante peoples of Ghana and through the African diaspora connects African American enclaves to a heritage many have been robbed of by the legacy of American enslavement. While the exact dates in the history of Kente-cloth formation are unknown, scholars such as Doran Ross have



Figure 4.1 // Detail of Kente cloth type known as Faprenu with "double weave" adwen. Cotton. Width of warp strips 9cm. FMCH X97.71. // Ross, Doran H. "Wrapped in Pride: Ghanaian Kente and African American Identity (UCLA Fowler Museum of Cultural History Textile Series)". Los Angeles: Fowler Museum at UCLA. 1st edition. January 1, 1998. P. 80

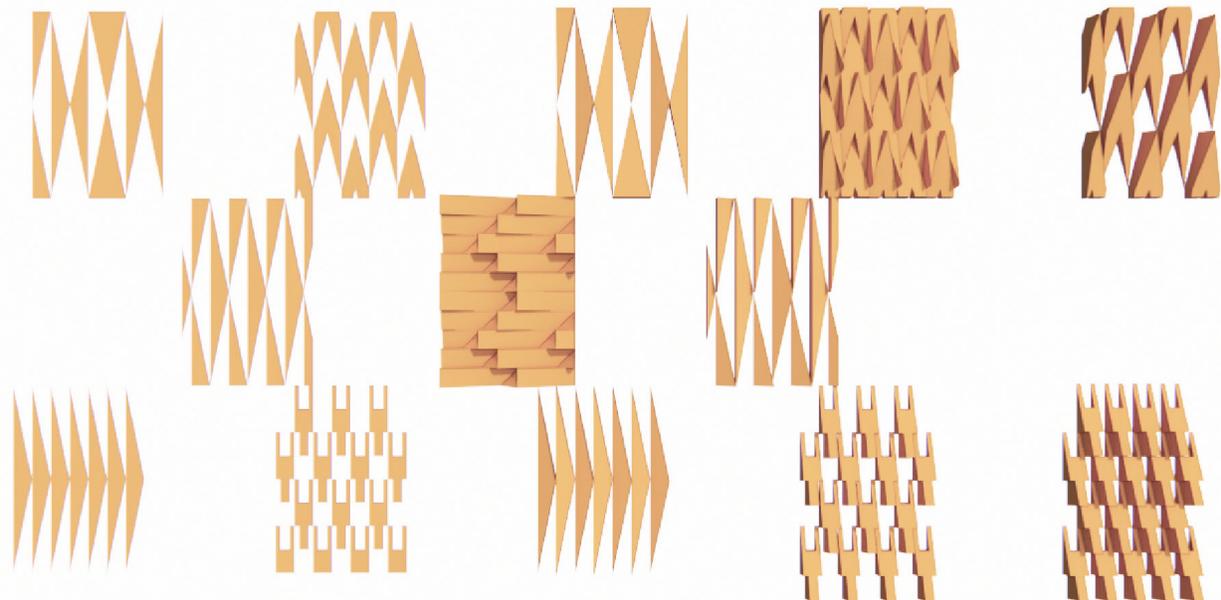
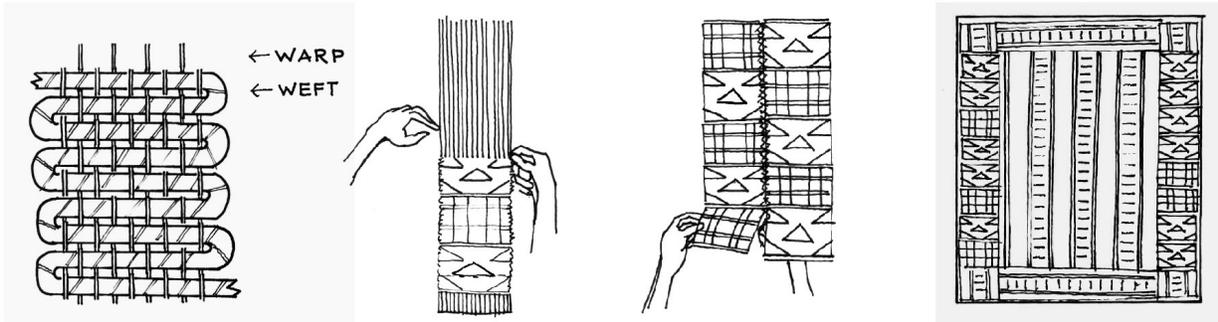


Figure 4.2 // Process, Logic, & Formal Studies // By Ian

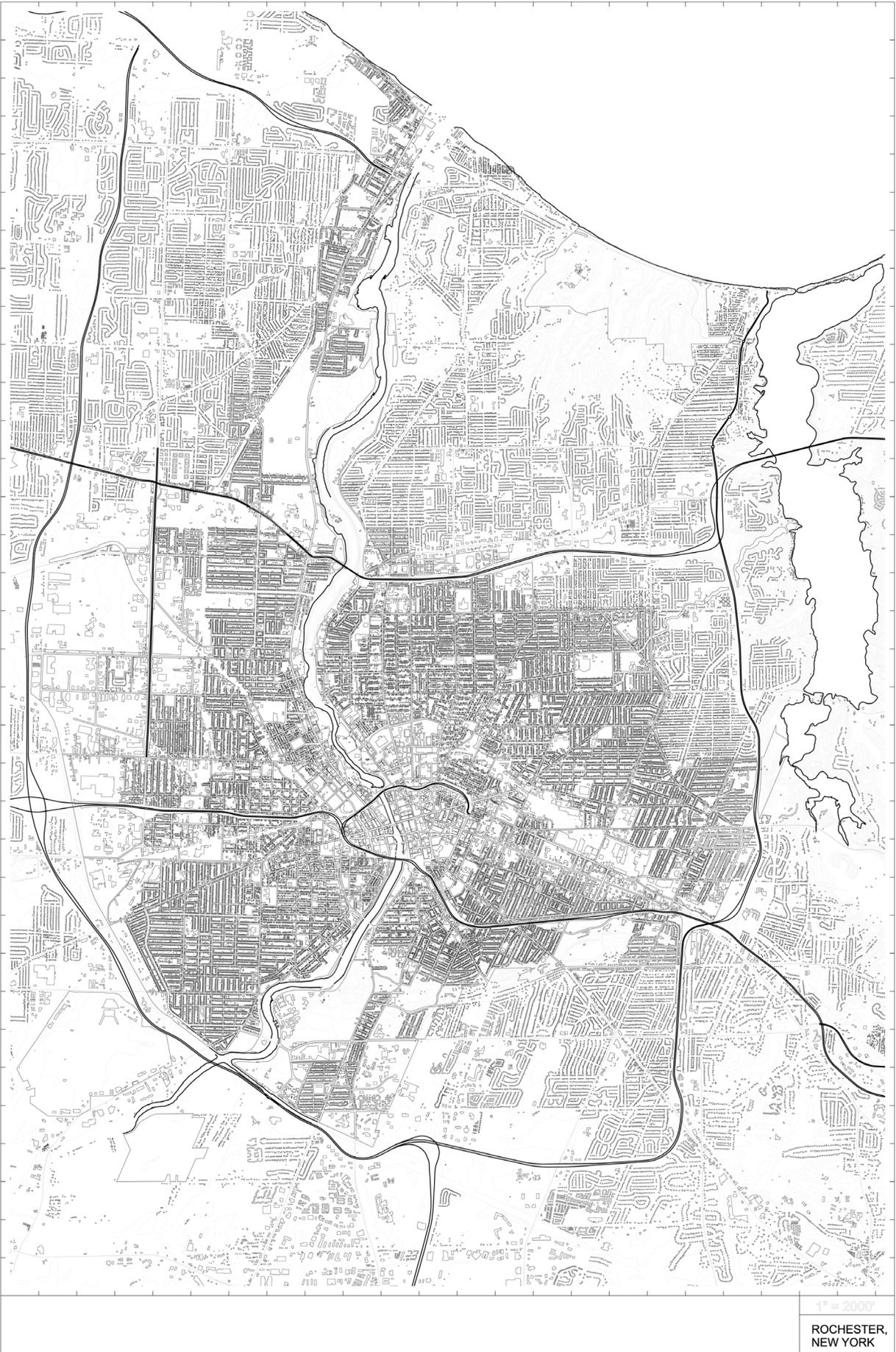


Figure 4.3 // City of Rochester at 1" = 2000' // By Ian

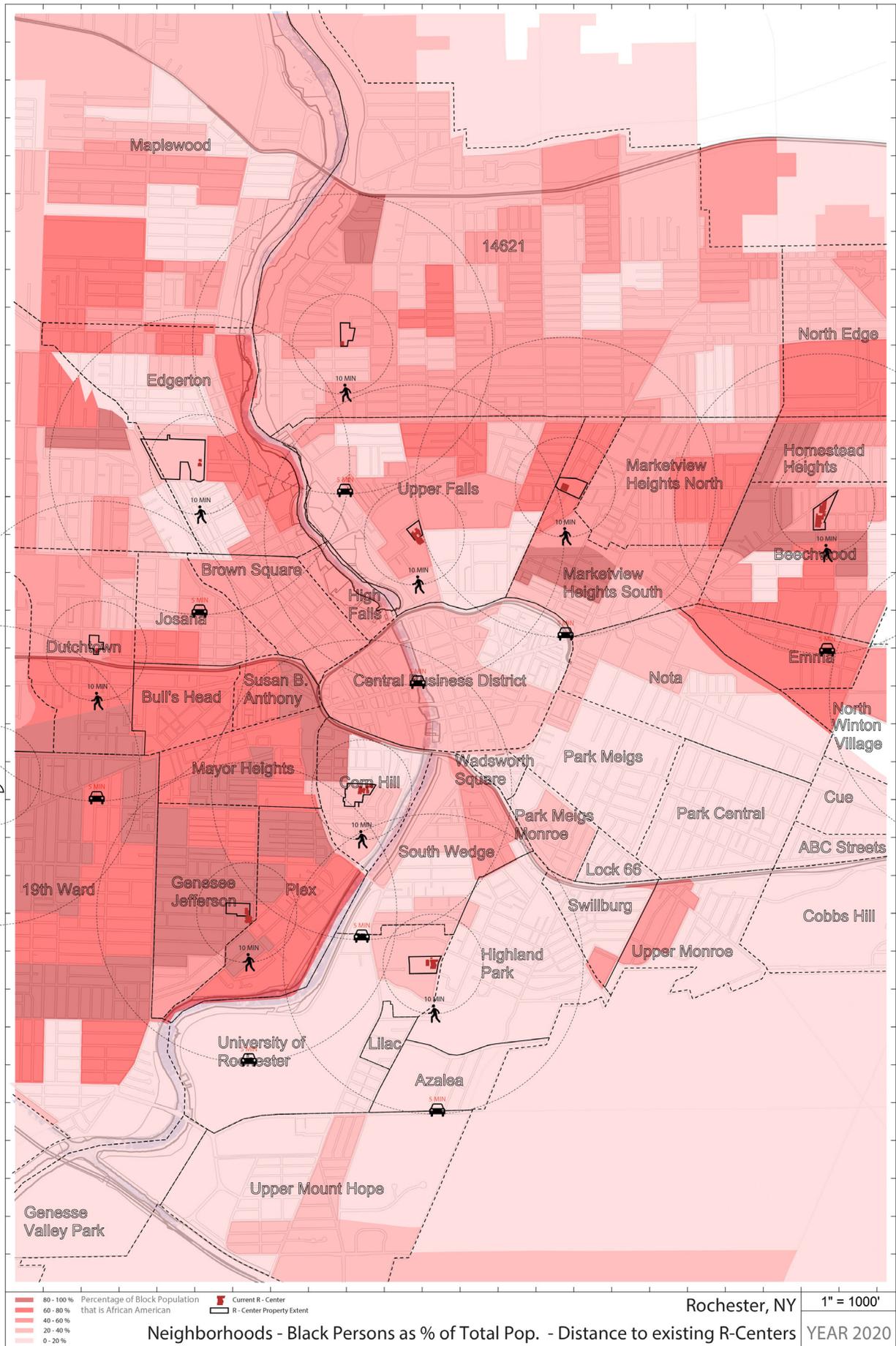


Figure 4.4 // 1" = 1000' - Location of R-Centers to the Density of African Americans // By lan

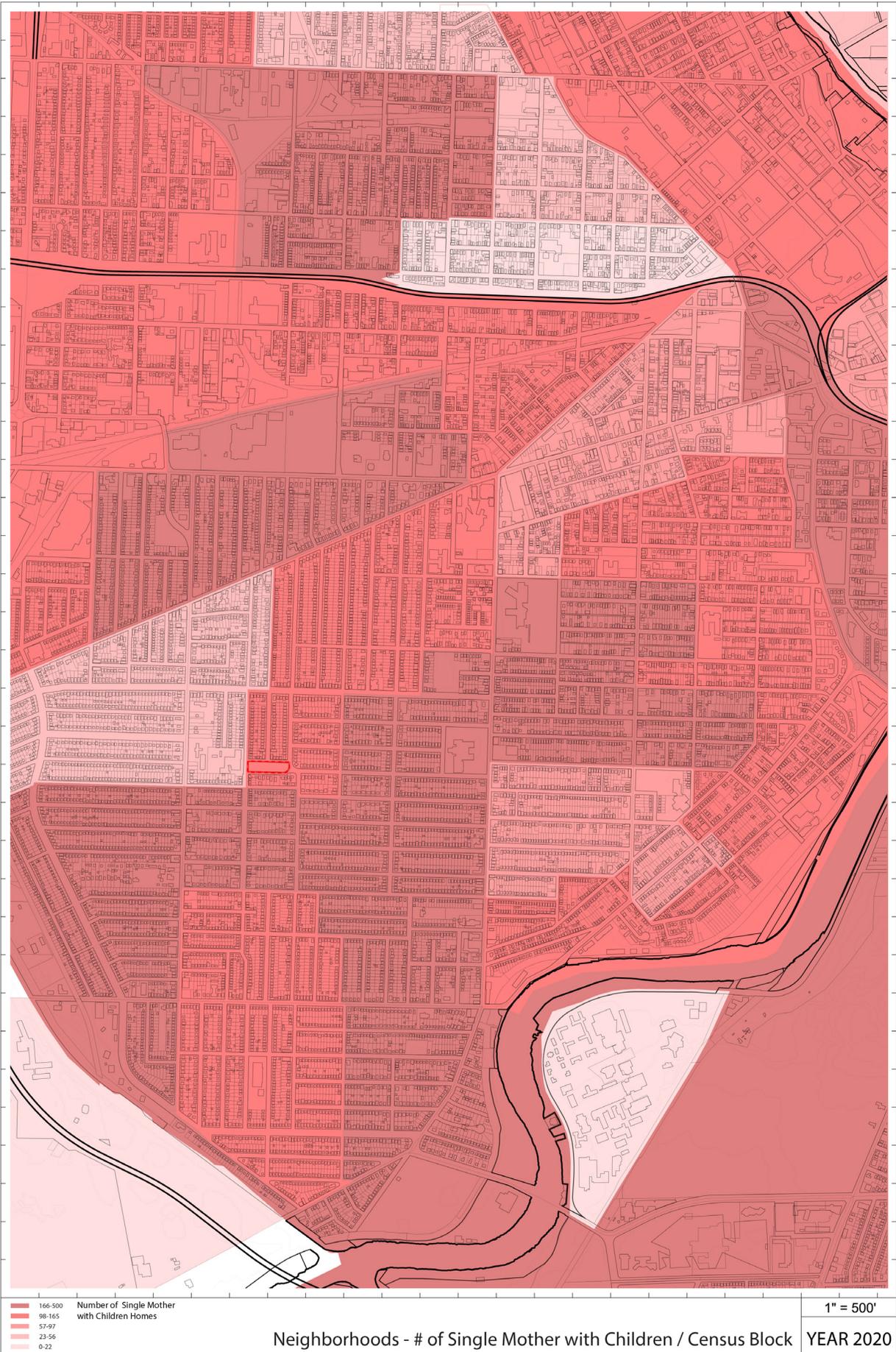


Figure 4.5 // 1" = 500' - 19th Ward Census Blocks - Single Mothers with Children under 18 // By Ian

found that fabric dyed with a narrow range of colors led the Asante peoples of Ghana to create “weft-faced designs that are called bankuo.”<sup>1</sup> These patterns became more complex over time, and with the addition of an expanded color palette created weft stripes called Badadua that are paired with even more complicated Adwen patterns to create Kente cloth.<sup>2</sup> (See Figure 4.1)

Understanding the methods of construction, logics of creation, and the authors of the cultural artifact assist the design team in the process of translating an artifact into a spatial form with its own construction, creation techniques, and authors. For traditional Kente cloth, the Adwen are woven on looms roughly the size of a person with the warp strands pulled out in a strip far beyond the loom. In the assembly of Adwen into larger cloth, each warp strip is shifted from its neighbor at the scale of the pattern resulting in a complex and beautiful fabric. As Ron Eglash elaborates in his book African Fractals: Modern Computing and Indigenous Design, the stretching and compression of the patterns in Kente cloth are mapped to different parts of the body to reflect the way human eyes focus on the face over the body with rapid saccadic eye movements.<sup>3</sup> Weavers would adjust the scale of the pattern and size of the weft shifts to compress at points of motion, such as the head and shoulders, with the pattern

elongating over the length of the body.<sup>4</sup> In early formal studies for The Weave, following the methodology of constructing shifted warp-strands created compelling and layered spaces that could stitch together different programs the community needs. Shifting the scale of certain wefts to appropriately engage with specific programs allowed this logic to translate the architecture into its immediate context. (See Figure 4.12)

In a parallel research effort to understand Kente cloth, a concurrent study sought to define the programmatic and spatial needs for the African American enclave in Rochester. With a 1”=2000’ scale the dense rectangular African American neighborhoods in the lower left stand in stark contrast to the meandering predominantly white suburbs in the lower right. (See Figure 4.3) Zooming in to 1”=1000’ the demographic distribution of the city is mapped relative to neighborhoods and Rochester community centers known as R-Centers. (See Figure 4.4) Through the Covid-19 pandemic, the R-Centers have been an important means of city support for the residents, providing food, childcare, tutoring, with both indoor and outdoor gymnasium play space. The 19th ward, home to the highest percentage of African Americans in the city, only have two neighboring R-centers, both outside of a reasonable walk and drive distance. Many of the census blocks within



Figure 4.6 // Aerial Perspective of the Weave Center // By Ian

the 19th ward have between 166-500 single mothers with children under 18 who must balance the challenges of both working and childcare.<sup>5</sup> (see Figure 4.5) The 19th ward is also in need of an expanded office to house the 19th Ward Community Association, one of the oldest community associations in the country. Operating out of a small house, any public meetings require conference space to be booked elsewhere in the city.

While the translation process of studying Kente cloth revealed formal logics, mapping the specifics of Rochester revealed certain programmatic needs. The synthesis of these two forces then drove the design of The Weave. (See Figure 4.6) The building sits



Figure 4.7 // Aberdeen Square Fair Parade // 19th Ward Community Association. "June-Square Fair." Rochester: 19th Ward Community Association. 2020

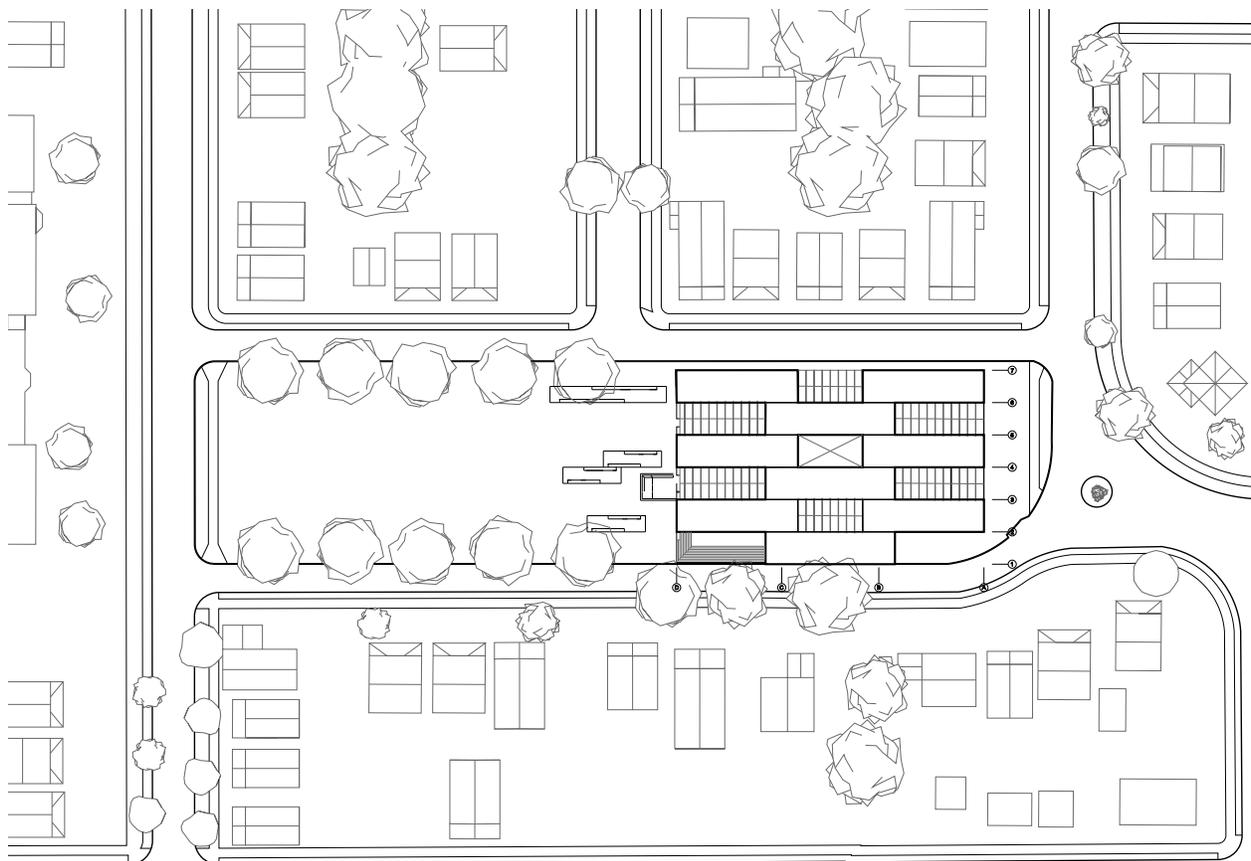


Figure 4.8 // Site Plan of the Weave Center // By Ian

on the western end of Aberdeen Square Park, one of the only open parks in the dense residential fabric of the 19th ward. (See Figure 4.8 and 4.9) Each June, the 19th Ward Community Association puts on the Aberdeen Square Fair, that sees the whole

community come out and celebrate with food, performances, and a parade. (See Figure 4.7). The Weave project becomes a new home for these celebrations, providing rental kitchen space to prepare food, storage for collapsible tents, and restroom facilities. (See



Figure 4.9 // Model // By Ian

Figure 4.10) The building program is arrayed in three columns, with the new home for the 19th Ward Community Association anchoring the park on the east side. (See Figure 4.11 for program quantities, Figure 4.13 for program location.) The enclosed and secure

middle column provides classrooms, spaces for teens to hang out, and a computer lab. The west is anchored by a gymnasium with circulation space stitching all three programs into a single building. (See Figure 4.14) The Weave is constructed with long-span pre-cast

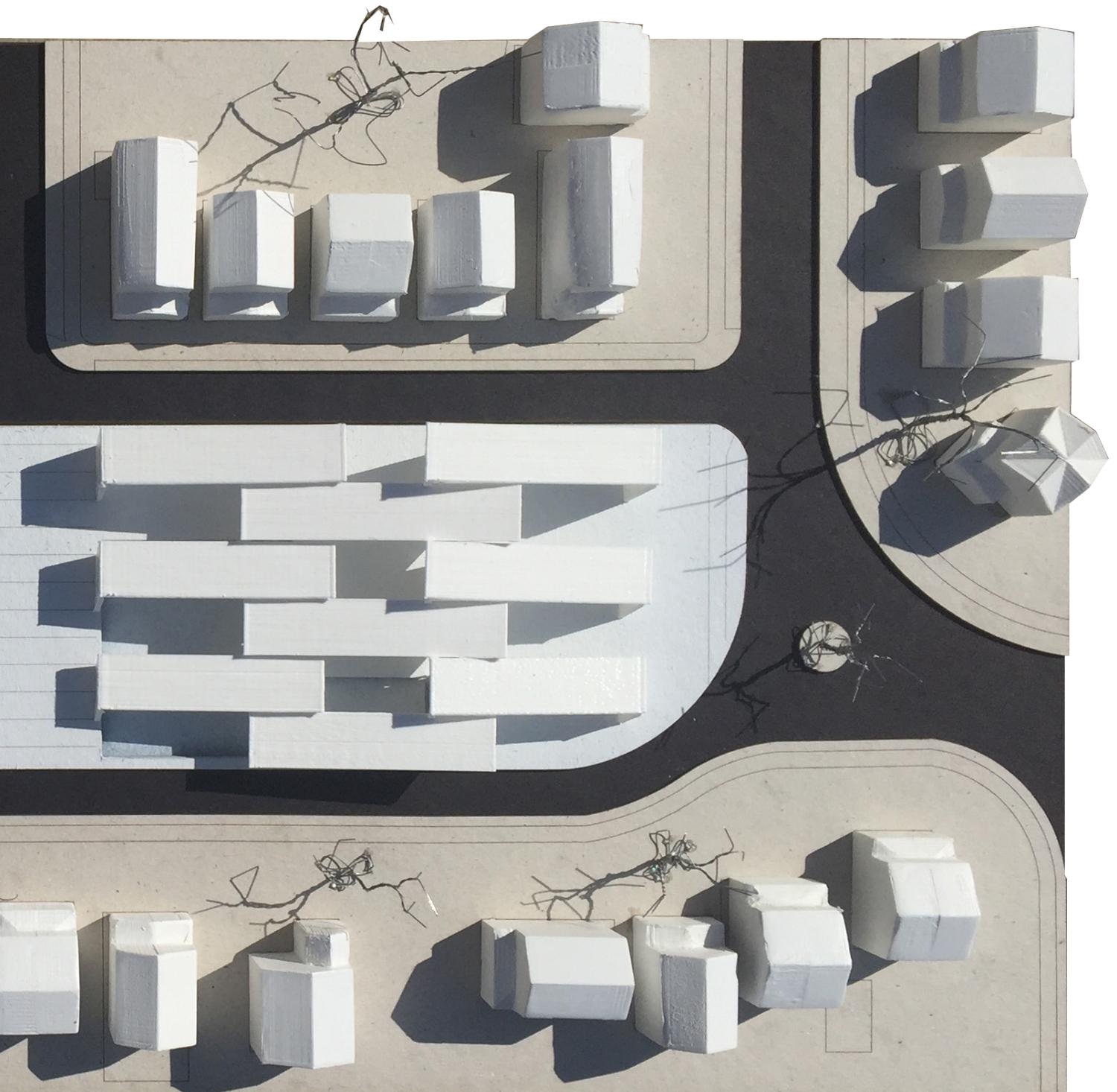




Figure 4.10 // Aberdeen Square Fair // By Ian



**PROPOSED PROGRAM**

**AREA (Sq Ft.)**

<b>19TH Ward Community Association</b>	<b>8300</b>
(6) Private Offices /Reception	2000
(1) Bookable Medium Conference Room	500
(1) Bookable Large Conference room	1800
(1) Auditorium/Board room	2000
(1) 19th Ward Community Display	2000
<b>Square Fair</b>	<b>500</b>
(1) EXT Tent/Table Storage Space	500
<b>Kitchen/Distribution</b>	<b>2000</b>
(1) Light service kitchen	800
(1) EXT Food distribution	600
(1) Fridge/Freezer	100
(1) Storage	500
(1) Small Loading Dock	500
<b>Gym</b>	<b>8000</b>
(1) Crossover court Gym	4000
(2) Locker rooms	3000
(1) Equipment Storage	600
(1) Janitors/Storage/Laundry	400
<b>Childcare</b>	<b>6400</b>
(1) EXT secure playspace	2000
(2) Classrooms	2500
(1) Computer Lab	1500
(1) Staff Lounge	400
(1) Interior playspace	2000
(1) Teen Lounge	1000
<b>Mechanical</b>	<b>9200</b>
(1) Boiler Room	3000
(1) Battery Room	1000
(1) Mechanical Room	4000
(1) Pump Room	1000
(1) Elevator + Mech Room	200
<b>Total Area</b>	<b>34,400</b>

Figure 4.11 // Program // By lan

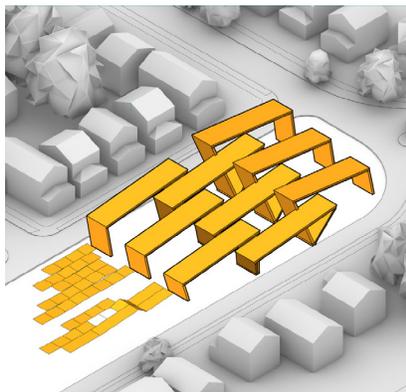


Figure 4.12 // Parti Diagram

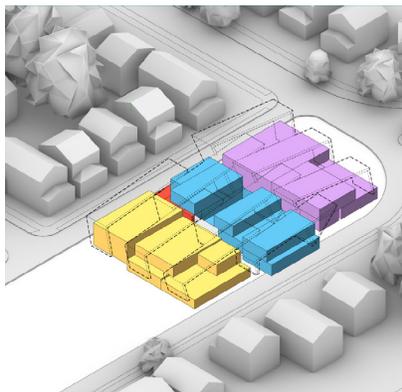


Figure 4.13 // Program Diagram

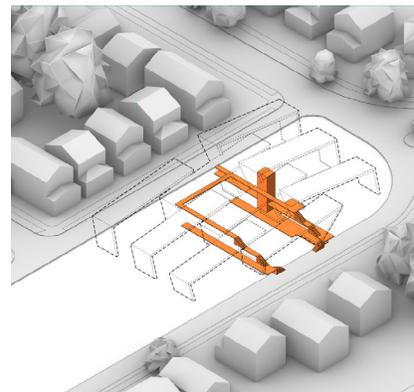


Figure 4.14 // Circulation Diagram

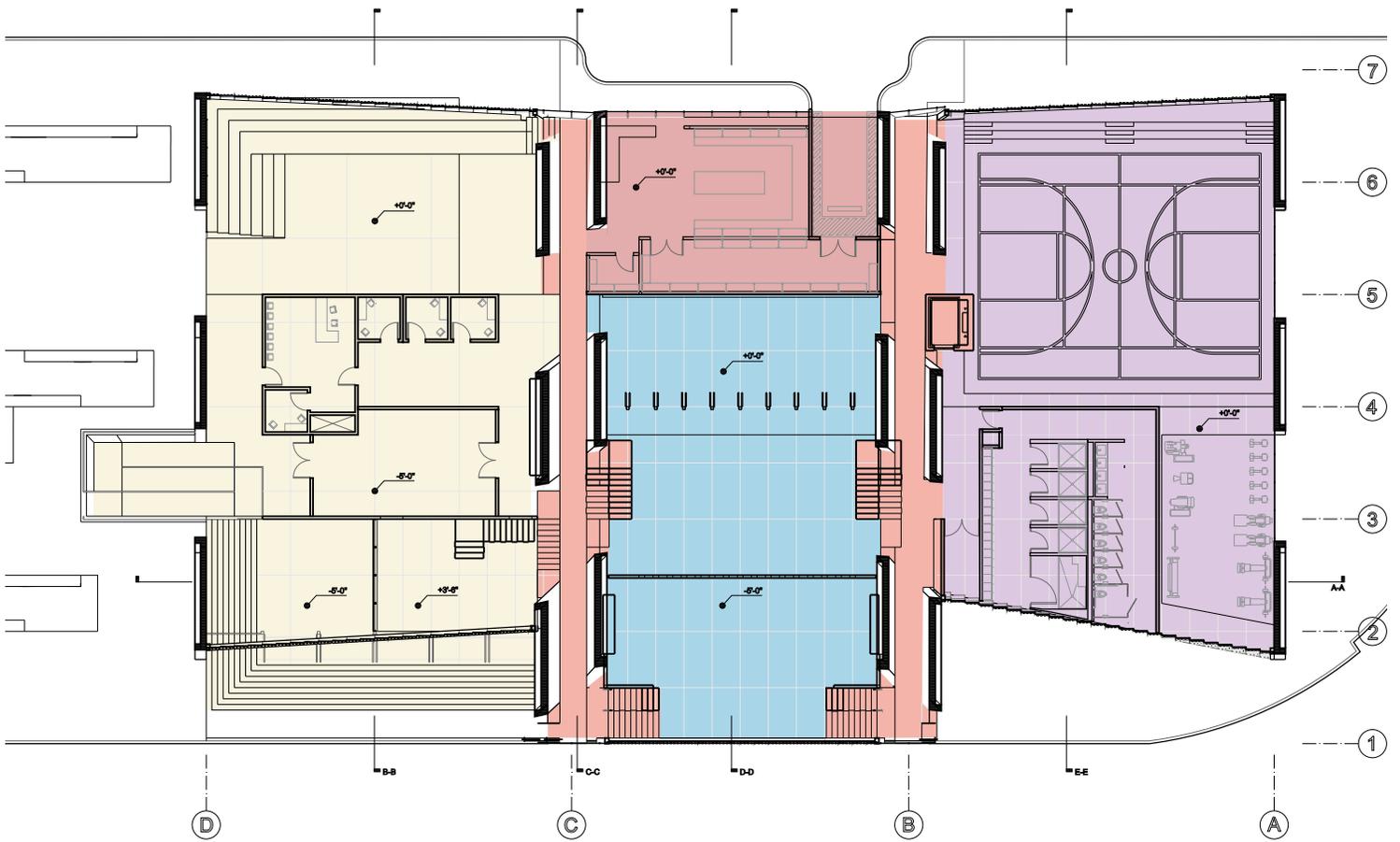


Figure 4.15 // Level 01 - Ground Floor Plan // By Ian

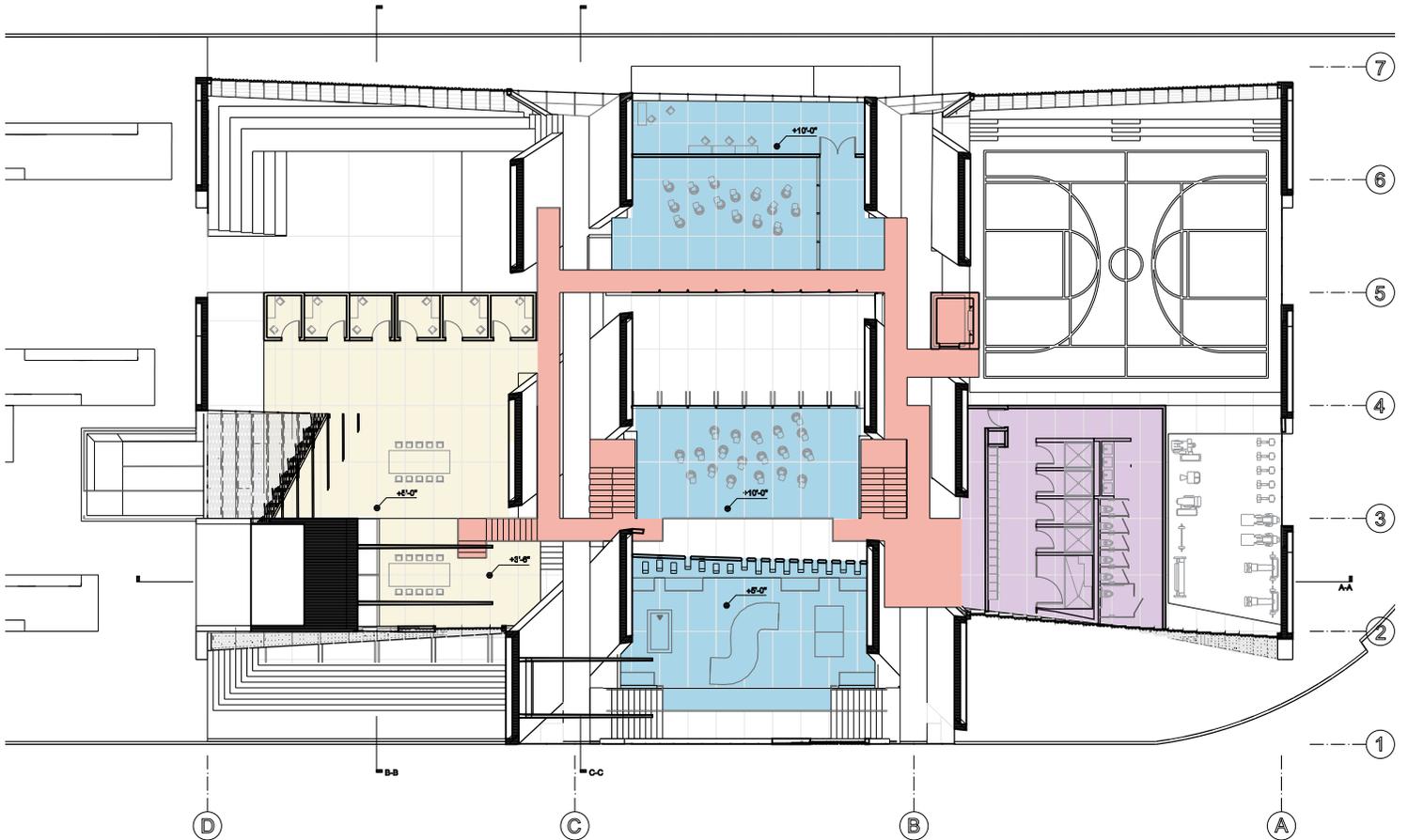


Figure 4.16 // Level 02 - Second Level Plan // By Ian



Figure 4.17 // Circulation Corridor // By Ian

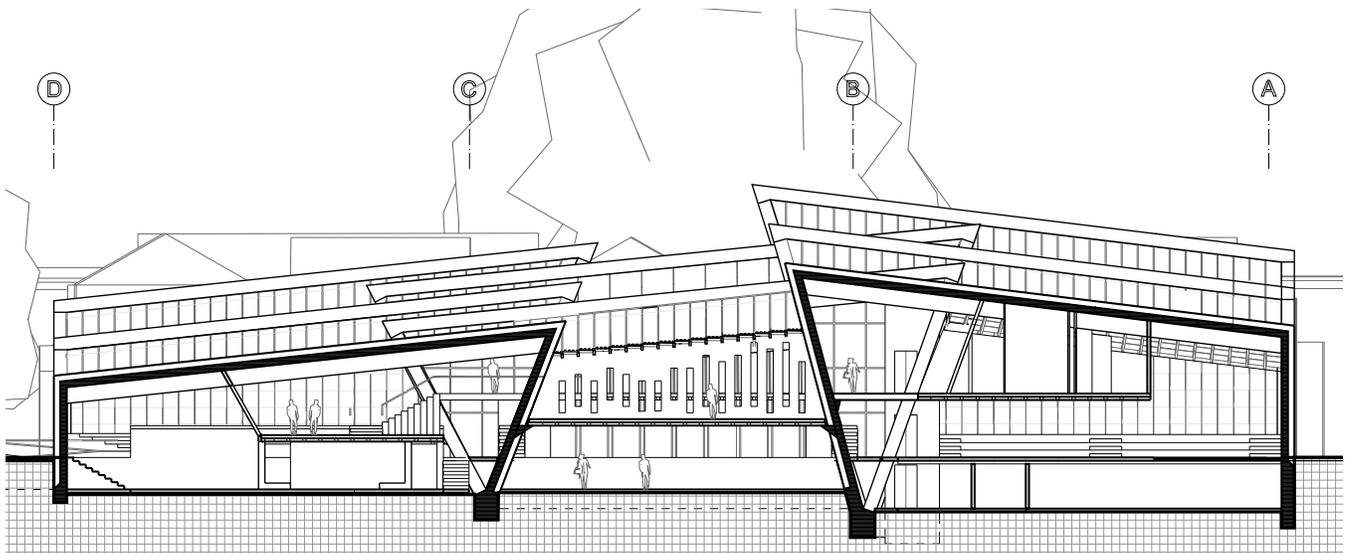


Figure 4.18 // Longitudinal Section A-A // By Ian

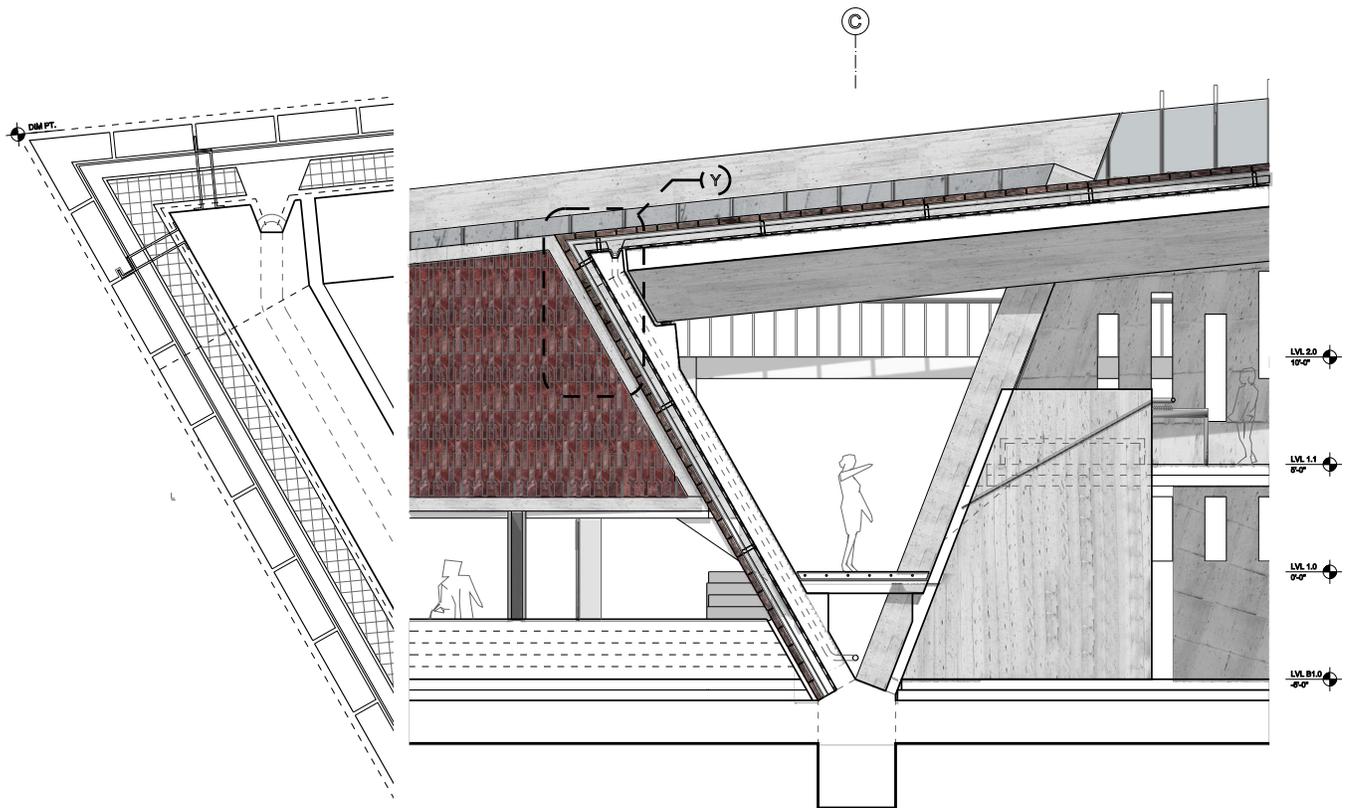


Figure 4.19 // Ribbon Wall Section + Corner Detail (Y) // By Ian

concrete T's sitting on split-V columns that separate the different programs. (See Figure 4.18 & Figure 4.19) Circulation running north-south sits in the 'V' providing needed acoustic separation between programs and creating a spatial-shifting indicative of Kente cloth. (See Figure 4.17) The slightly shifted weft of each

architectural ribbon also provides clerestories drawing ever-changing ribbons of light into the project. (See Figure 4.20) After evaluating the geological formations underneath the site, two distinct stone benches of Queenston shale and Utica shale became the material inspiration for the project, providing a natural

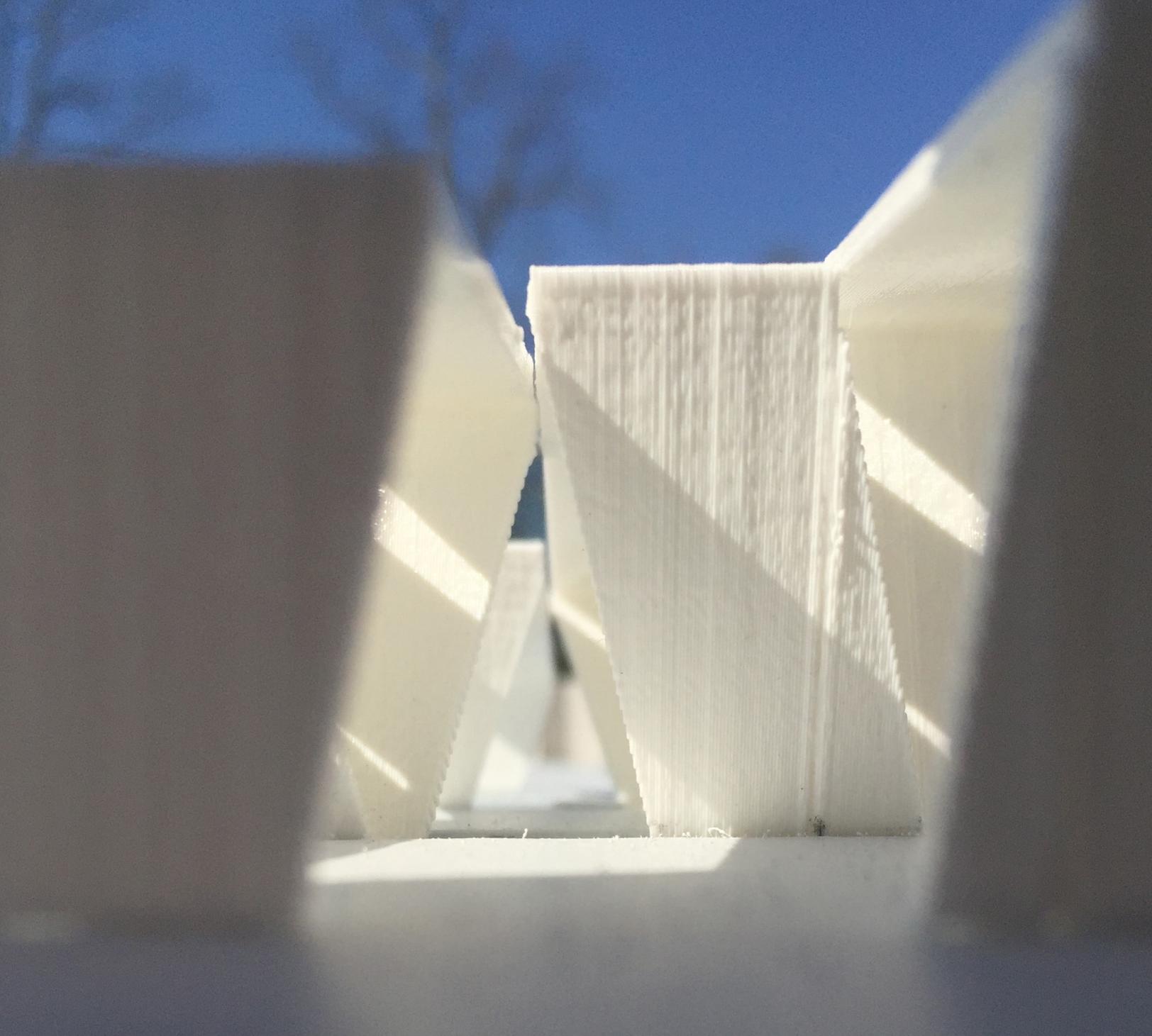


Figure 4.20 // Atmospheric Light Qualities // Model by Ian

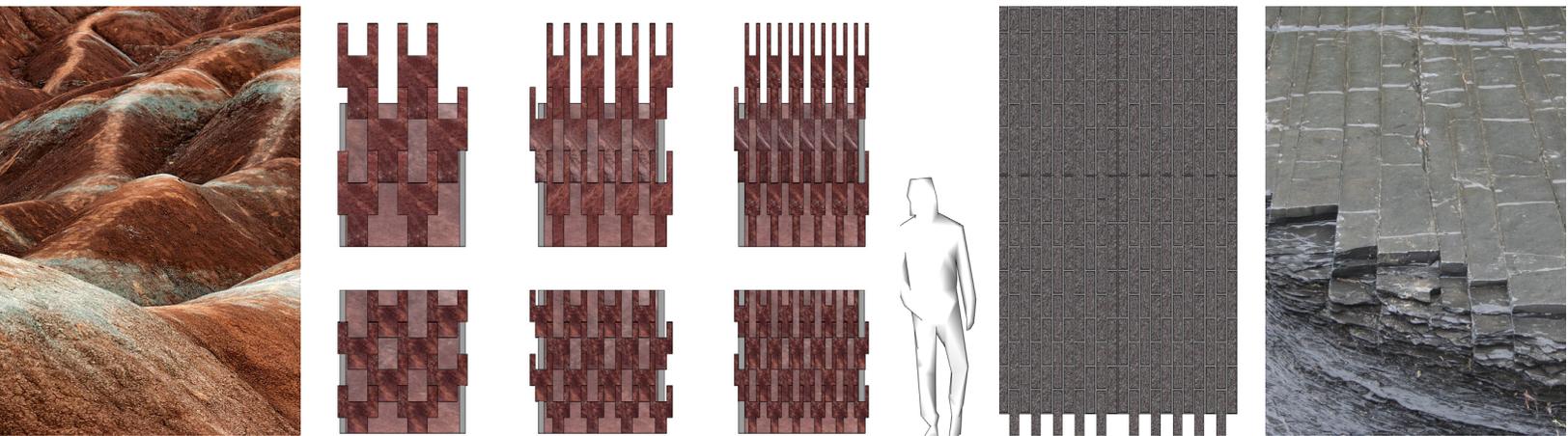


Figure 4.21 // Queenston & Utica Shale + Kente Pattern Facade Studies // By Ian

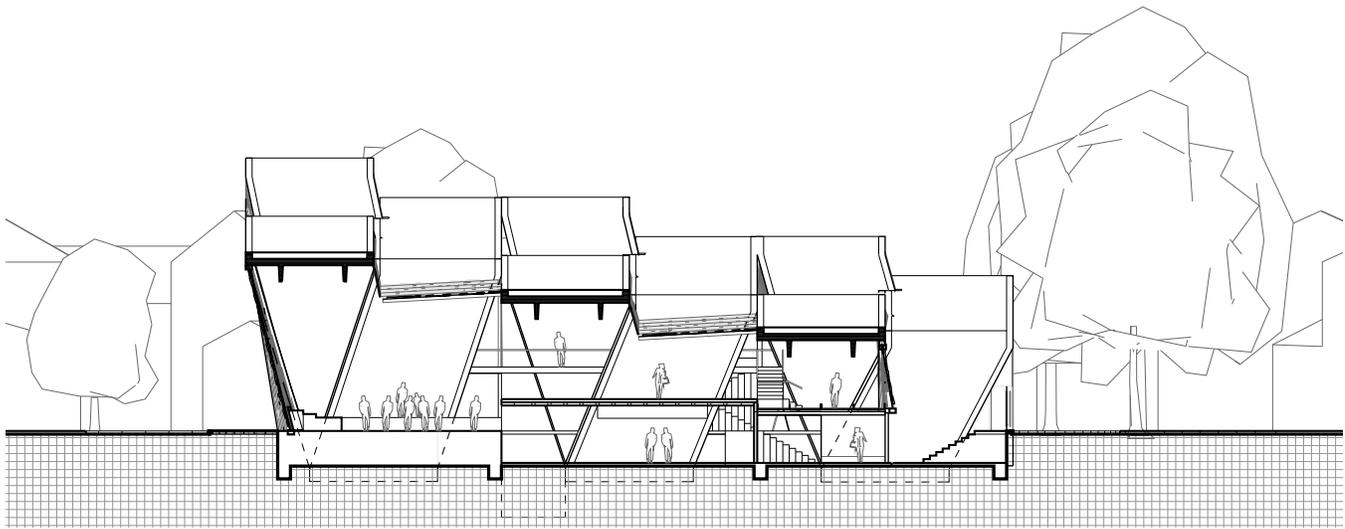


Figure 4.22 // Transverse Section B-B // By Ian

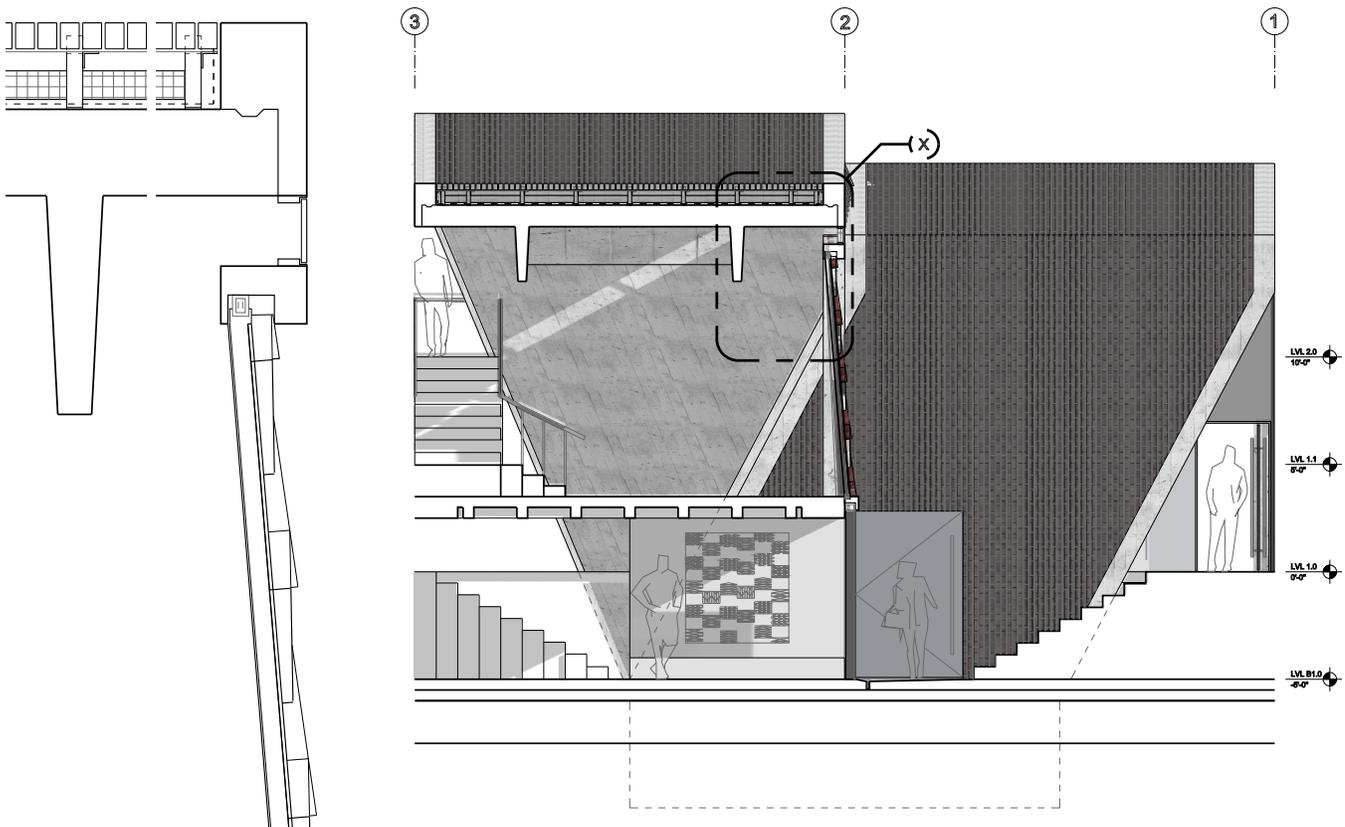


Figure 4.23 // Translucent Stone Wall Section + Edge Detail (X) // By Ian

site-specific pattern to the weft ribbons of the Weave's structure. (See Figure 4.21 and 4.24)

1 Ross, Doran H. *Wrapped in Pride: Ghanaian Kente and African American Identity* (UCLA Fowler Museum of Cultural History Textile Series). Los Angeles: Fowler Museum at UCLA. 1st edition. January 1, 1998. P.78

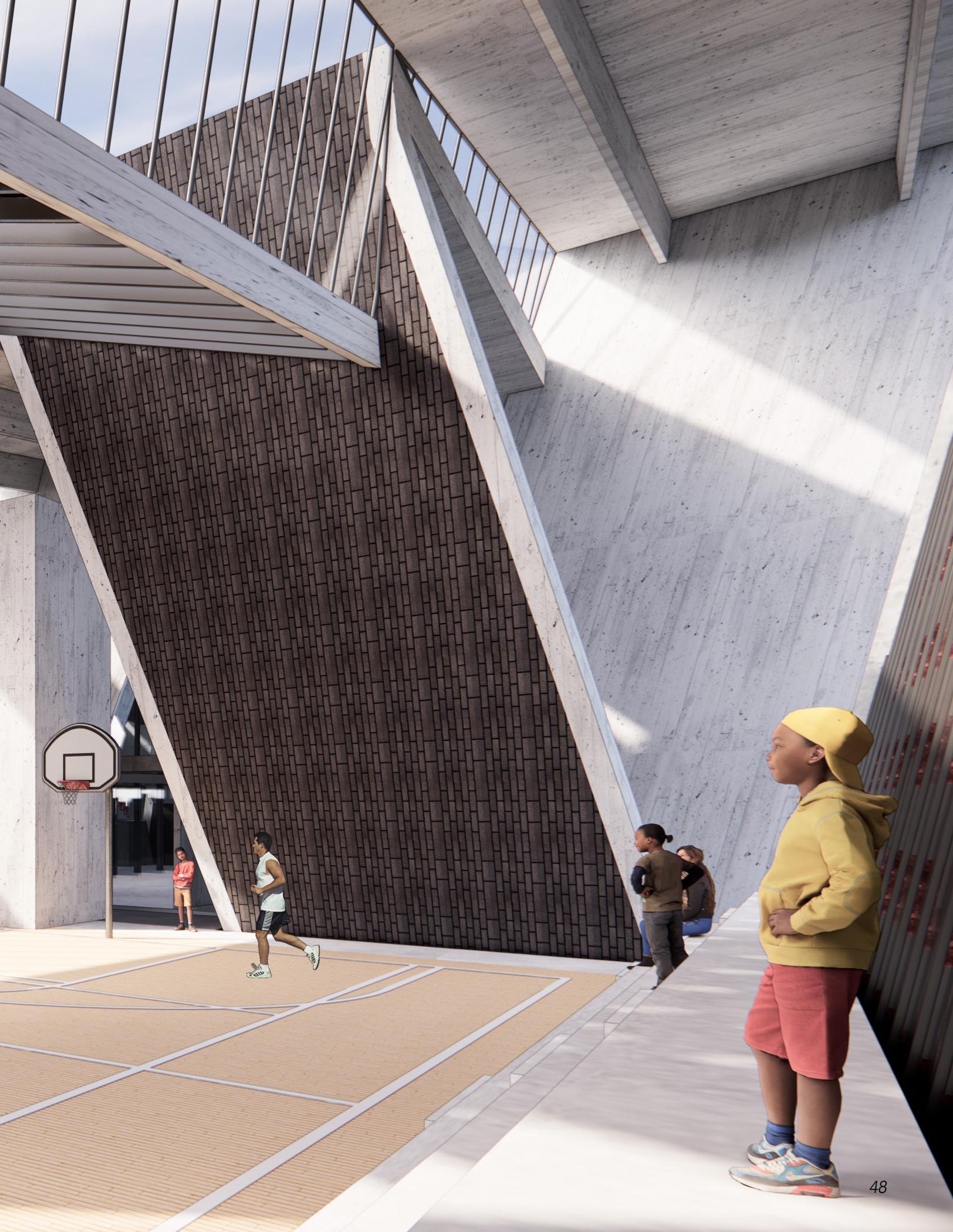
2 Ross Doran H. *Wrapped in Pride: Ghanaian Kente and African American Identity* (UCLA Fowler Museum of Cultural History Textile Series). Los Angeles: Fowler Museum at UCLA. 1st edition. January 1, 1998. P.78

3 Eglash, Ron. *African Fractals: Modern Computing and Indigenous Design*. New Jersey: Rutgers University Press. 1st edition. March 1, 1999. P.75

4 Eglash, Ron. *African Fractals: Modern Computing and Indigenous Design*. New Jersey: Rutgers University Press. 1st edition. March 1, 1999. P.76

5 SimplyAnalytics & US Census Bureau American Community Survey Data. "#Family Type: Female householder, no husband present with own children of the householder under 18 years, 2020." New York: SimplyAnalytics, Inc. Accessed March 29, 2020





# Designing with, not for, the Community

Research by partnering with local leaders to organize and expand the agency of a community through design strategy. Projects that manifest through this design strategy are anchored in the aims and agendas of local leaders.

*This methodology was developed through the Housing+Communion studio of ARCH 7113, led by Visiting Critic Peter Robinson. Graphics are done by me unless otherwise noted.*

While the previous research approaches enable a better understanding from a top-down, 'architect doing research' perspective, spaces that are most closely aligned with their local inhabitants are developed with them, not for them. Bryan Lee Jr. of Colloqate, an architecture + design justice practice, presents three levels of engagement a design team can have with a community: Outreach, Engagement, and Organizing.<sup>1</sup> Outreach is the most common and consists of project leaders informing stakeholders of ongoing processes in neighborhoods and communities. The stream of information only goes in one direction, from the project leaders to the community and only seeks to inform community members. If the project aspiration is to embed itself within a local community in a way that responds to local people's habits, desires, and ownership, outreach does little to assist the design team in creating that space. Instead this creates a feeling in the community that they are not being listened to but are going to have to suffer a new project stamped



Figure 5.1 // Entrance to Universe City // photo by Ian

down into their context.

Engagement in contrast allows information to go both ways, from project leaders to the community and vice versa. Engagement can manifest in a range of different ways, from information sessions with question-and-answer to more productive collaborative workshops. However the focus of Engagement is on collecting data to inform the design process, which comes at the cost of deprioritizing community building.<sup>2</sup> Community Engagement can provide extremely valuable input to the design process seeking to create spaces that are tuned to their context, but this process can still segregate the community from connecting with and taking ownership

of the project. Ownership is not simply about legal ownership but also how a community becomes personally invested in a project, with habits shaping and being shaped by the created space, with new architecture becoming an important part of community rhythms.

What Outreach and Engagement lack, Organizing can supply. Organizing is rooted in empowering a community to develop this kind of ownership in a project. Organizing requires a design team to embed themselves into the existing missions of the community and work to not only develop a design solution with a project but also expand the agency of local people by defining the scope of the project in partnership with that community. The aim of the design process shifts from developing a designed solution towards equipping your collaborating community members with your own design process, thereby empowering the community through the development of a design solution. This solution is ultimately a direct reflection of the aims and habits of that community as they are integral players in its formation and the project will be successfully embedded in its local context.

An example of Organizing with the community is seen in the design-strategy studio Peter Robinson led in partnership with Universe City, an ecological public health laboratory in East New York and Brownsville. Universe City



Figure 5.2 // Presenting to Community // photo by Cornell AAP

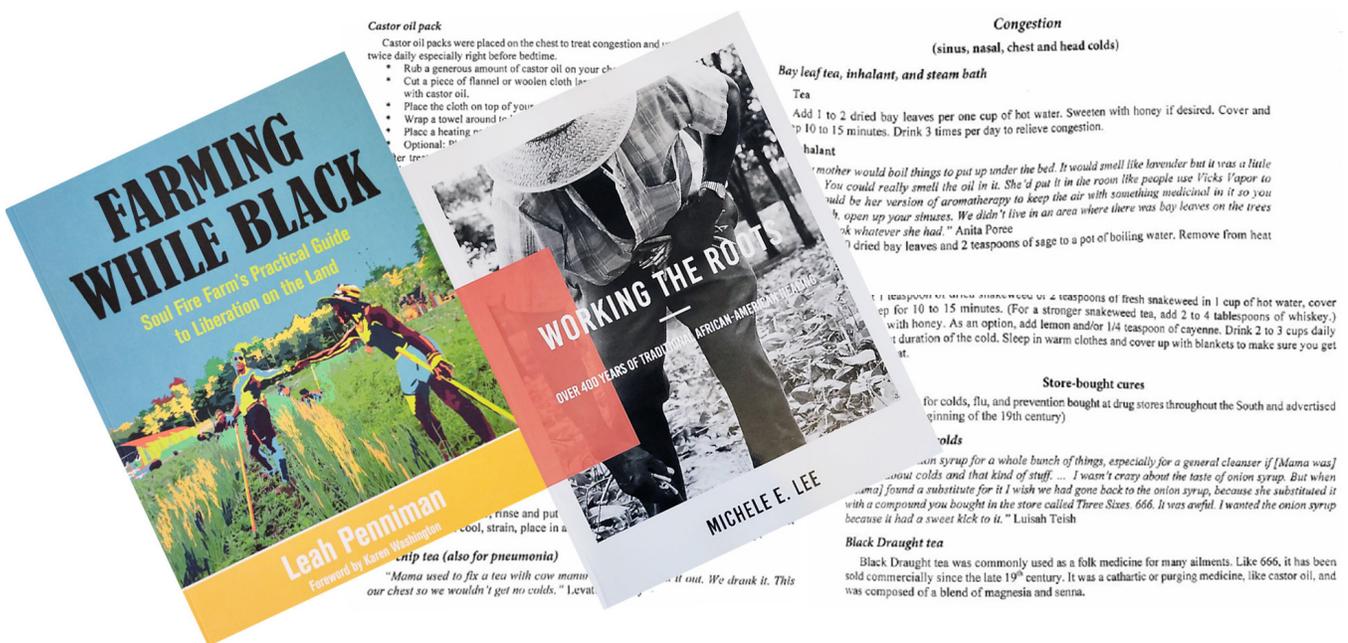
has been locally embedded at the border of Brownsville and East New York for many years and has its own ideas, visions, and approaches to addressing the issues that the East New York and Brownsville communities face. Instead of typical design research approaches of mapping demographics, income ranges, park locations, etc. the studio began by listening to presentations about the work that Universe City has been doing and the challenges they are working to address. Some of these presentations were given by students in the Neon Arts Initiative hosted by Universe City, where local youth were given time and guided resources to imagine what could change and be implemented to improve the area. The first task of the Cornell design team was to expand the existing projects proposed by the Neon Youth— both amplifying work already being done in the community and giving the Cornell design studio a rooted understanding of the challenges that



highlights proposed fridge locations relative to sites of trauma and identifies the local network of gardens and markets that could assist in filling the fridges. The diagram at the bottom also communicates the potential for Universe City to scale their aquaponics system to support roughly 300 people per week in the community. (See Figure 5.6) Finally, the third side provides space for local residents and community members to add their own remedies, leading the fridge to be not only a source of healthy food but a monument of support within the community to overcome trauma. As opposed to initial site research focused on regional demographic data, spending time immersed with the aspirations of a local community member provides

specific information about what challenges the community faces, and the solutions and spaces they see as having the most potential to address those problems.

To deepen our understanding of Universe City's mission in East New York and Brownsville, the second module of Peter Robinson's studio developed media to synthesize our observations of what we saw to be important to Universe City and elicit a guided response from the wider community through a public party. Only after spending time with the existing initiatives of our partners, we began to synthesize and initiate a design strategy to further their operations. By presenting the media through a large public party, the studio was positioned as Organizing



RECIPES AND REMEDIES PROVIDE IMPORTANT CONNECTIONS TO OUR ANCESTORS AND ARE A PART OF GENERATIONAL KNOWLEDGE. THE WORK OF LEAH PENNIMAN AND MICHELE E. LEE PROVIDE A CONNECTION TO THE ELDER WISDOM AND HEALING REMEDIES. HEALING FRIDGES SERVE AS A HUB THAT GIVES THE COMMUNITY BOTH THE PHYSICAL AND MENTAL INGREDIENTS OF HEALING.

Figure 5.4 // Healing Fridge Recipes // By Ian

**BAY LEAVES**



SQUEEZE LEAF TO RELEASE OILS

**CLEAN WOUNDS**



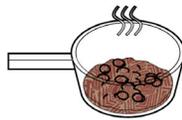
RUB THE LEAF ON THE AFFECTED AREA



BOIL 2 FRESH BAY LEAVES IN 1 CUP HOT WATER, STEEP FOR 10-15 MINUTES, THEN DRINK  
**REDUCE HEADACHE**

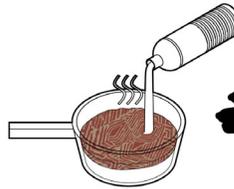


**CASTOR BEANS**



TOAST BEANS ON STOVE UNTIL FRYE-LIKE CONSISTENCY

**HEAL WOUNDS, FIGHT FEVER**

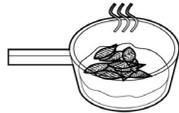


MIX WITH WATER, WAIT FOR OIL TO RISE, SKIM OIL OFF TOP, STORE IN BOTTLE



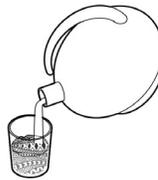
RUB ONTO CHEST & ABOOPEEN TO FIGHT FEVER  
RUB ONTO WOUND & COVER WITH WOOLEN CLOTH

**WHITE SAGE**



MIX LEAVES WITH BOILING WATER, STEEP FOR 8-10 MINUTES

**REDUCE SINUS INFECTION**



STEEP FOR 8-10 MINUTES, DRINK AS TEA

DRINK 1 CUP 3 TIMES A DAY



**RESCUE HERB**  
(SOLENDSTEMON MONASTACHUS)



CUT LEAVES OFF PLANT

**EASE RAUC-ATTACK, REDUCE INFLAMMATION**



EAT CUT LEAVES

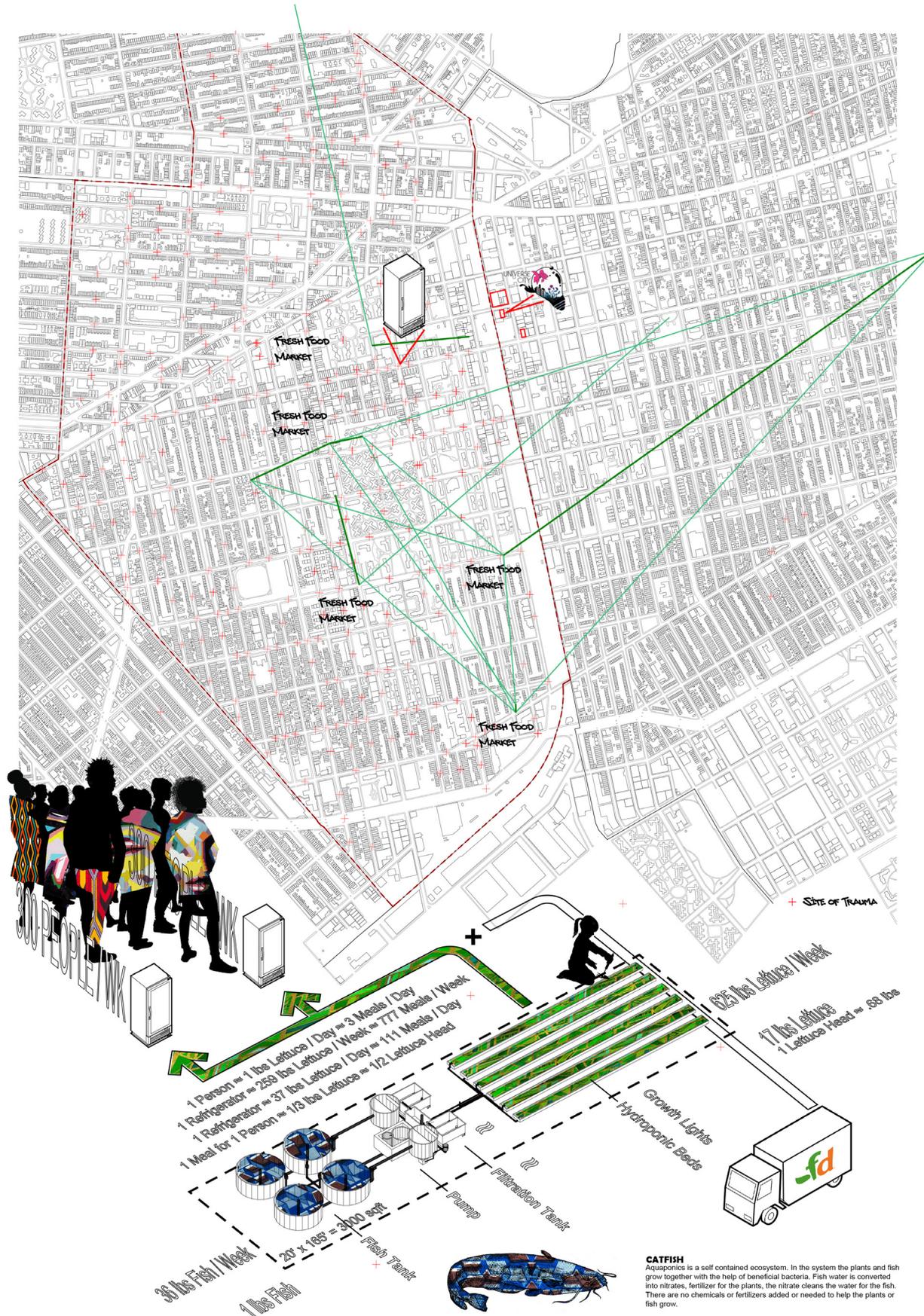


# THE HEALING FRIDGE

FIND ALL THE INGREDIENTS IN THE FRIDGE



Figure 5.5 // Healing Fridge Recipe Instructions // By Ian



# THE HEALING FRIDGE

FIND THE FRIDGE, FOOD, & HEALING



Figure 5.6 // Location of Healing Fridges to Garden Network // By Ian

rather than Engaging by recording input as well as developing trust that the design team is working with the community. Moving at the speed of trust, a principal tenet developed by Peter Robinson and BlackSpace, undergirds each moment the design team engages with the community and prevents a rushed project schedule that would cripple Organizing efforts.<sup>3</sup> As the media are recording devices of community input, their presentation at future moments of local engagement becomes an index of previous listening and are key to reinforcing the trust grown through many moments of interaction and collaboration. Working with Justina Bethune, Ade Lawrence, and Junfu Cui, we developed a 1/32" model of Universe City's neighborhood that became

the board of an interactive game. (See Figures 5.7 and 5.8) Cards and associated colored blocks represented different programs that Universe City provides for the community, with special purple cards available that allowed visitors to add new programs and ideas to expand the mission of Universe City. (See Figure 5.9) To play, a card is placed on the edge of the game and a game piece is placed in an internal or external location of East New York. Each card mandates that if a piece is played, other associated programs must also be played to encourage thinking of the cycles and interdependencies each program requires. As an example, playing a Community Garden requires the additional play of a Compost Center and Market Exchange. Each



Figure 5.7 // Universe City The Game - In Action // By Ian



Figure 5.8 // Universe City The Game - Pre-play Setup // By Ian

additional program card played adds local jobs indicating how increasing local programs can economically benefit locals. Photographs of game play through the party captured the imagined flow and desires of different community members and the many new suggested programs.

Synthesizing game play provided a clear matrix of relationships between existing and proposed programs within four categories of action that Universe City provides: Art, Business, Food, and Mobile Engagement. (See Figure 5.10) This matrix became foundational for the final design strategy and Organizing with the community by clearly showing what Universe City is already doing,

and highlighting new programs that could further their initiatives. As the category with most community suggestions and many ties to the Universe City mission of being an ecological public health laboratory, the third module of the studio focused on the category of mobile engagement as central to design strategy. The developed plan enables Universe City to grow their business of fighting footing apartheid in Brownsville and East New York in a way that benefits local community members. As the final design strategy component of the studio, my proposal built from existing connections between Universe City and NYCHA through the Connected Communities initiative and Green City Force, who works

<p><b>COMMUNITY GARDEN</b></p>  <p><b>Definition</b> Growing food for the community, in the community.</p> <p><b>Requires</b> +1 Compost +1 Market Exchange (per 2 Commu. Gardens)</p> <p><b>New Local Jobs</b> +3</p>	<p><b>AQUAPONICS</b></p>  <p><b>Definition</b> Using natural complementary cycles to grow fish and leafy greens.</p> <p><b>Requires</b> +1 Market Exchange (within 2 inches) +1 Food Processing (within 6 inches)</p> <p><b>New Local Jobs</b> +2</p>	<p><b>BUSINESS INCUBATOR</b></p>  <p><b>Definition</b> Flexible workspace for community members to start their own businesses.</p> <p><b>Requires</b> +1 Market Exchange +1 Industrial Repurposing (within 2 feet)</p> <p><b>New Local Jobs</b> +1 to +10</p>	<p><b>MARKET EXCHANGE</b></p>  <p><b>Definition</b> Where the community can buy raw materials and sell community products.</p> <p><b>Requires</b> +1 Community Garden OR +1 Aquaponics OR +1 Compost Center OR +1 Business Incubator</p> <p><b>New Local Jobs</b> +1</p>
<p><b>COMMUNITY RESTROOMS</b></p>  <p><b>Definition</b> A safe space to clean and do what we all need to do.</p> <p><b>Requires</b> +1 Add when any program is placed outside Universe City Sites</p> <p><b>New Local Jobs</b> +1</p>	<p><b>DISTRIBUTION</b></p>  <p><b>Definition</b> Taking food and goods to distribution spots (refrigerators) and the market.</p> <p><b>Requires</b> +1 Market Exchange OR +1 Food Processing</p> <p><b>New Local Jobs</b> +2</p>	<p><b>FOOD PROCESSING</b></p>  <p><b>Definition</b> Prepping grown food for sale, distribution, or free consumption.</p> <p><b>Requires</b> +1 Market Exchange +1 Distribution OR +1 Community Garden +1 Aquaponics</p> <p><b>New Local Jobs</b> +4</p>	<p><b>INDUSTRIAL REPURPOSING</b></p>  <p><b>Definition</b> Gathering, Cleaning, &amp; Congregating wasted but usable materials.</p> <p><b>Requires</b> +1 Distribution +1 Market Exchange (place within 6 inches)</p> <p><b>New Local Jobs</b> +1</p>
<p><b>ADD YOUR PROGRAM HERE</b></p> <p><b>COLLABORATIVE ART STUDIO</b></p> <p><b>Definition</b> SHARED WORKSPACE FOR ARTISTS</p> <p><b>Requires</b> RESTROOM +1</p> <p><b>New Local Jobs</b> +4</p>	<p><b>ADD YOUR PROGRAM HERE</b></p> <p><b>PV POWER</b></p> <p><b>Definition</b> SOLAR ARRAY TO PROVIDE POWER AND STEADY INCOME</p> <p><b>Requires</b> CASH INVESTMENT</p> <p><b>New Local Jobs</b></p>	<p><b>ADD YOUR PROGRAM HERE</b></p> <p><b>BIKE KITCHEN</b></p> <p><b>Definition</b> BIKE MAINTENANCE, PART SWAP, BUILD BIKES, ETC.</p> <p><b>Requires</b> BIKE - SAFE STREETS</p> <p><b>New Local Jobs</b> +2</p>	<p><b>ADD YOUR PROGRAM HERE</b></p> <p><b>MOBILE HEALTH TEAM</b></p> <p><b>Definition</b></p> <p><b>Requires</b></p> <p><b>New Local Jobs</b> YES</p>

Figure 5.9 // Universe City The Game - Program Cards // By Ian

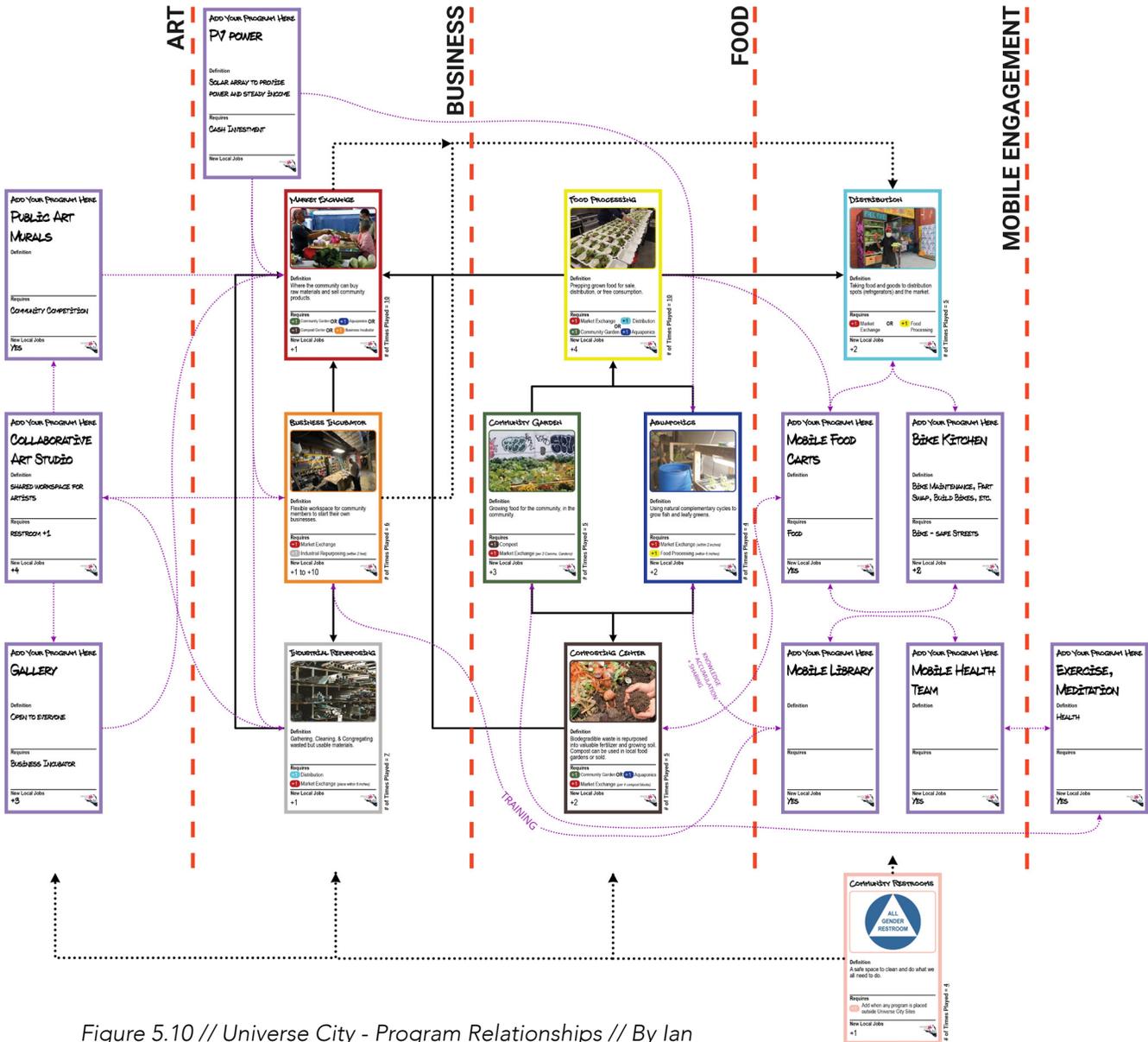


Figure 5.10 // Universe City - Program Relationships // By Ian



Figure 5.11 // The community playing - Universe City The Game // Photo by Ian, Game by Ian + Team

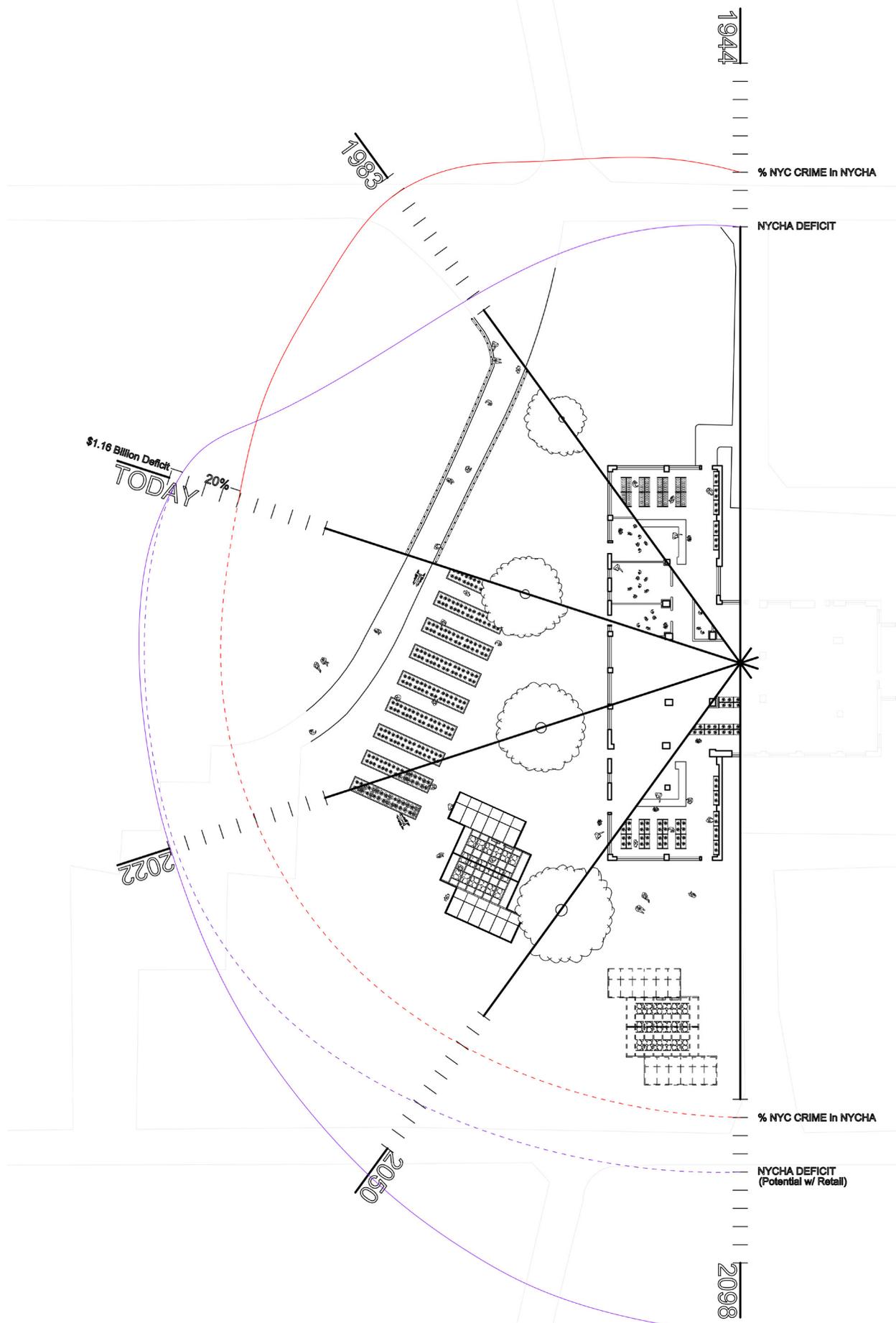


Figure 5.12 // Timeline of the NYCHA ground floor - Growbox Greenhouse implementation 2022 // By Ian



Figure 5.13 // Final Design Strategy Proposal Presentation by Ian // Photo by Cornell AAP

with NYCHA residents to create gardens that provide affordable fresh produce. The ultimate aim of the strategy is to establish Universe City as a business entity that can re-occupy the ground floor of NYCHA buildings, as local businesses had before being displaced in 1944.<sup>4</sup> (see Figure 5.12)

The immediate first step to this process extends the growing season beyond summer through the placement of an aquaponics grow-box and attached greenhouse at a participating NYCHA community. (See Figure 5.15) As a distinctly temporary structure, the grow-box greenhouse fights the perception of new developments that are erected on NYCHA property without any residents input

and can be increased & decreased in size with resident participation. As a test case to practice construction techniques and provide a physical example to share with reticent NYCHA residents before asking for their partnership, a reduced grow-box greenhouse could be erected within Universe



Figure 5.14 // Final Design Strategy Audience // Photo by Ian

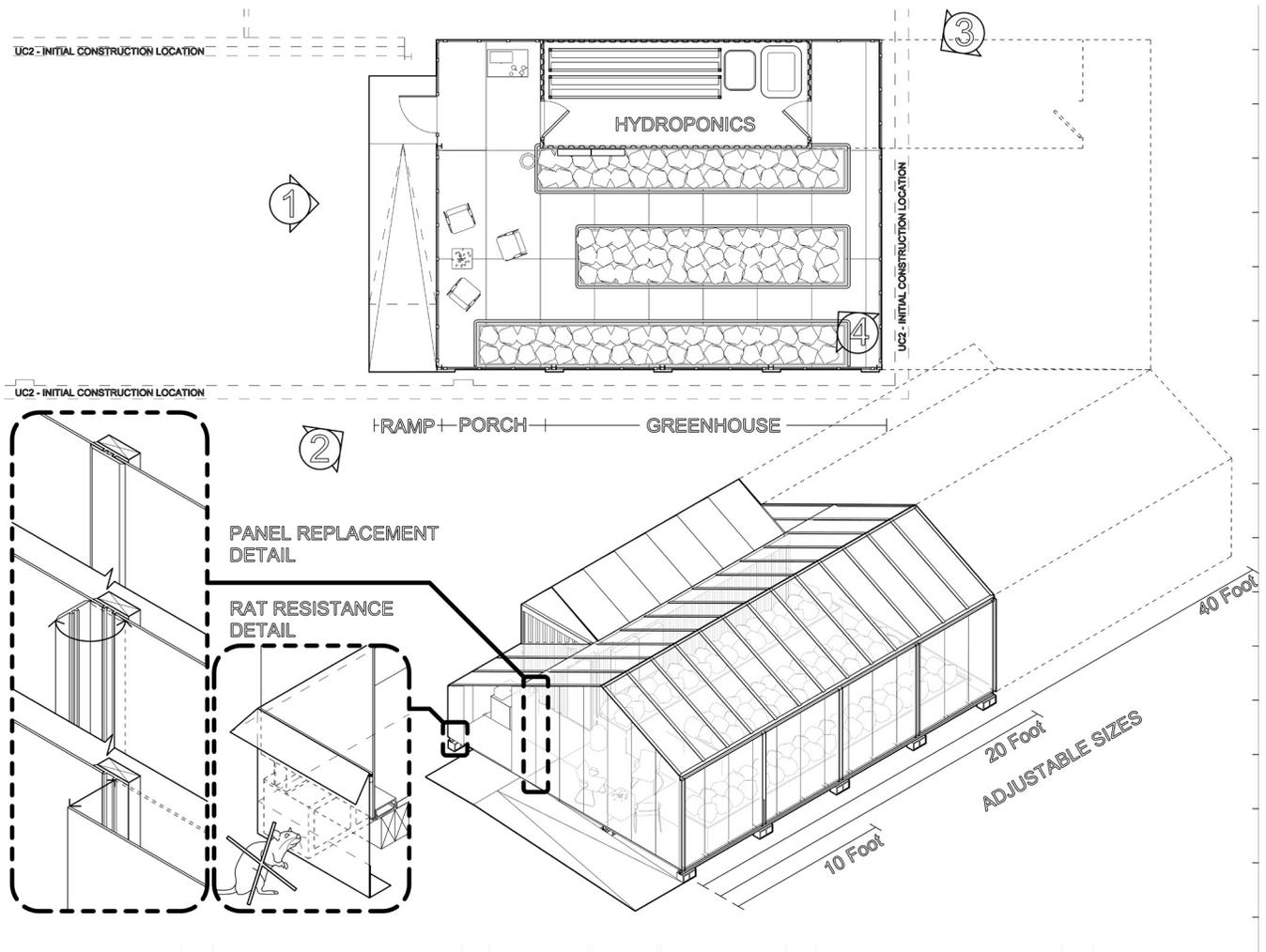


Figure 5.15 // Growbox Greenhouse Plan, Axon, Details // By Ian

City's existing space. (See Figure 5.16) To communicate how the implementation of a grow-box greenhouse can amplify the lives of residents in NYCHA, graphic illustrations highlight how the built-in porch can provide a warm gathering space in the winter, anchor the produce market, host growing-based education classes, and be maintained by local residents. (See Figure 5.17) A time-wheel of events also highlights key moments of community congregation through which the grow-box greenhouse can become an important resident meeting point in every season. (See Figure 5.18) Finally two maps

are provided that Universe City can use in discussion with NYCHA residents around potential locations for grow-box greenhouses. (See Figure 5.19 for Van Dyke Houses, and Figure 5.20 for Glenmore Plaza) Through Peter Robinson's approach of acknowledging existing work, amplifying that work through recording media, and activating the community with design strategy, a design team can embed themselves in a locale and craft the right questions that lead to supportive rather than suppressive architecture. As a form of pre-design occurring before the development of architecture

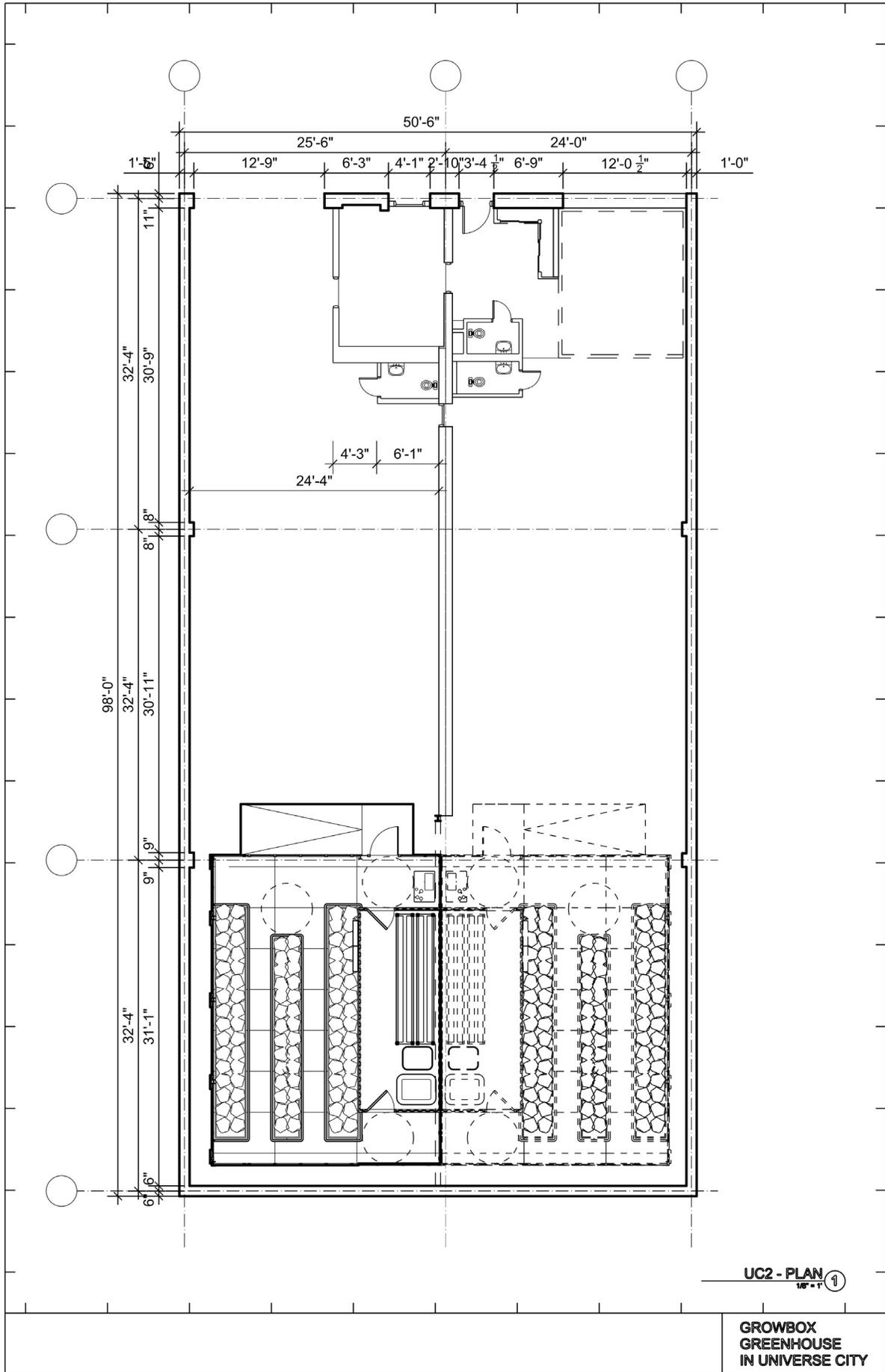


Figure 5.16 // Growbox Greenhouse in Universe City // By Ian

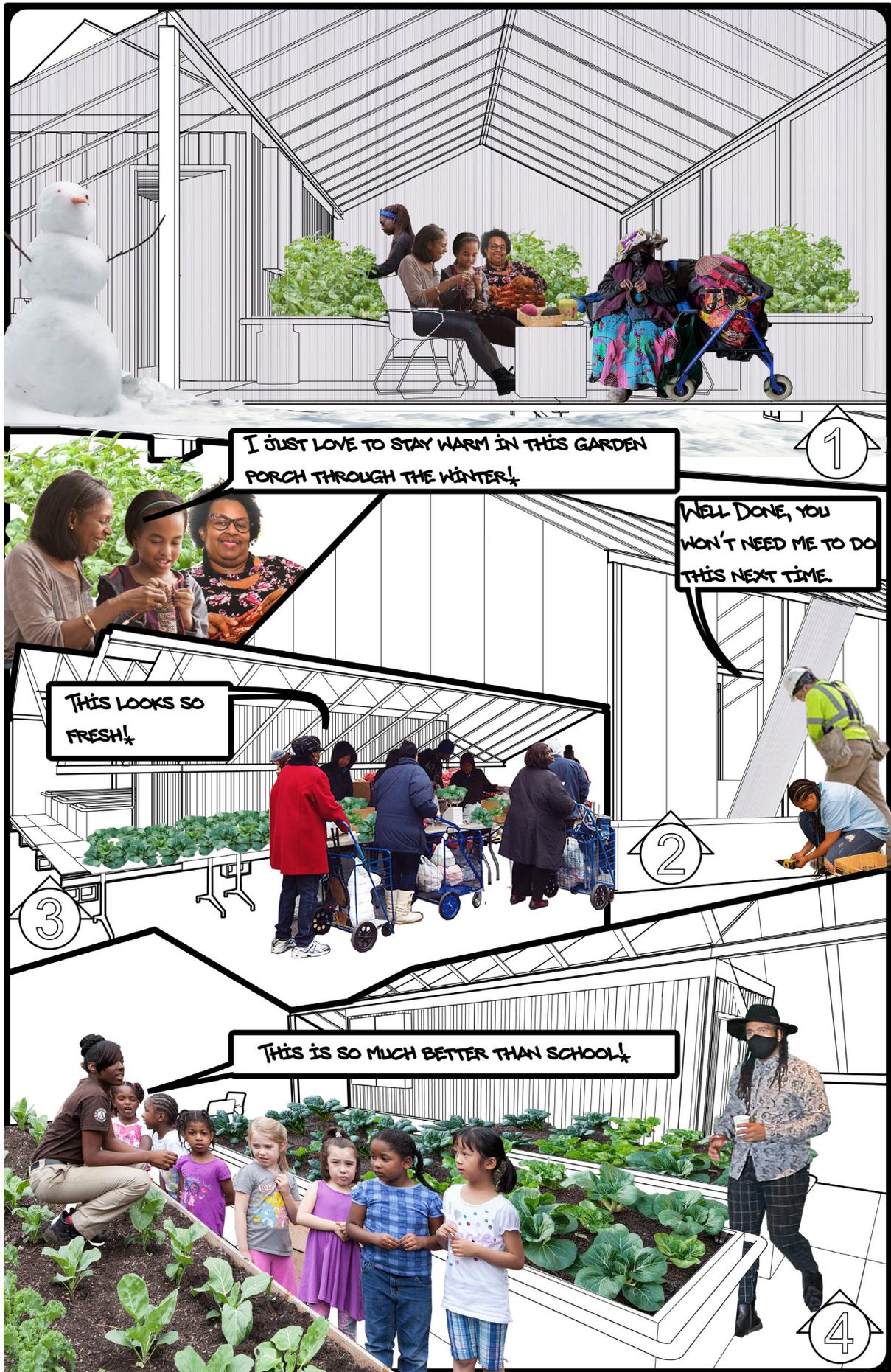


Figure 5.17 // Growbox Greenhouse Use Examples // By Ian



Figure 5.18 // Seasonal Events + Daily Use Timeline // By Ian

in concept design, design strategy in this capacity assists the design team in asking the right questions, rather than looking for the right answer to the wrong questions. Implementing this process, or a process like it, lifts a team from Engaging a community to helping Organize that community, ultimately increasing the agency of those that participate in the process and grounding architecture in its local context.

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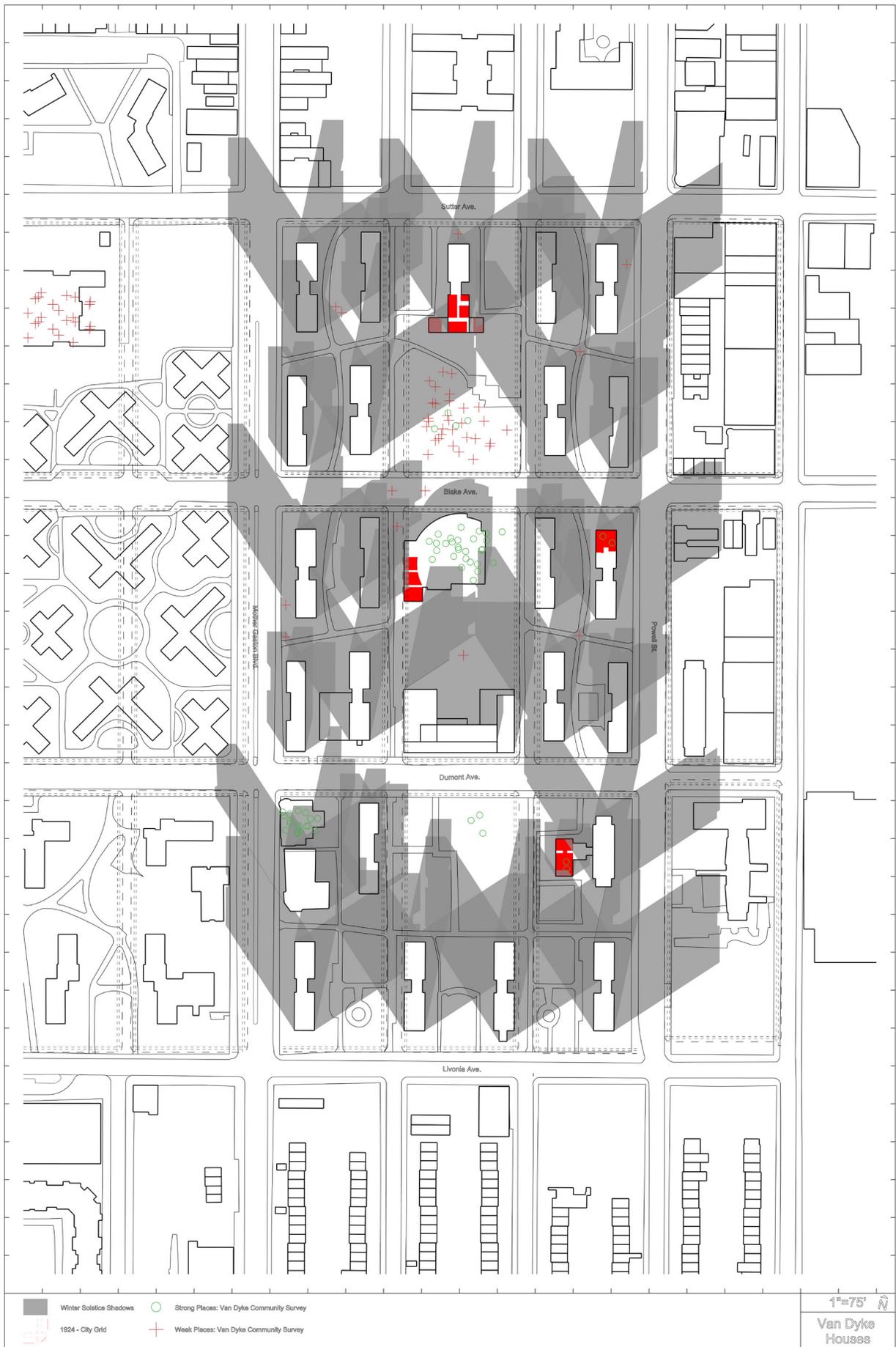


Figure 5.19 // Site Forces - Van Dyke Houses - NYCHA // By Ian

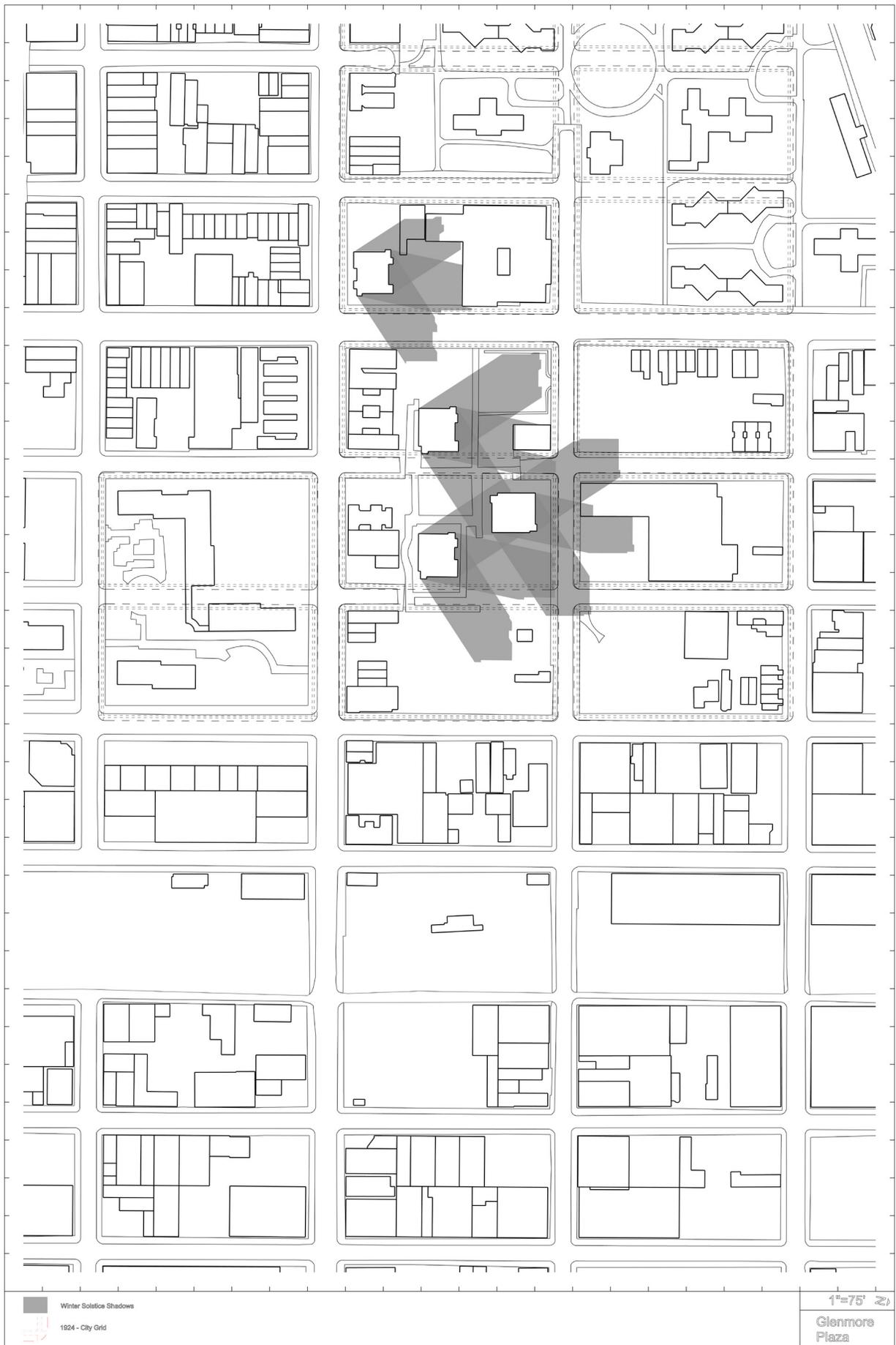


Figure 5.20 // Site Forces - Glenmore Plaza - NYCHA // By Ian

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