



2024

Natalia Kassam

Housing Collective Thresholds

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*how can we learn new ways to live
together?*

a life dedicated to loving God through architecture

With immense gratitude I share the work which is a result of conversations, inspirations, thoughts, and encouragements exchanged with those whose generosity consistently ignites a zeal for seeking to bring joy and beauty to the world through design.

Committee

Committee Co Chair

Marcelo López-Dinardi

Texas A&M University Department of Architecture, Assistant Professor

Committee Co Chair

James Michael Tate

Texas A&M University Department of Architecture, Assistant Professor

Committee Member

Dr. Amanda Stronza

Texas A&M University Department of Ecology & Conservation Biology, Professor

Studio Faculty

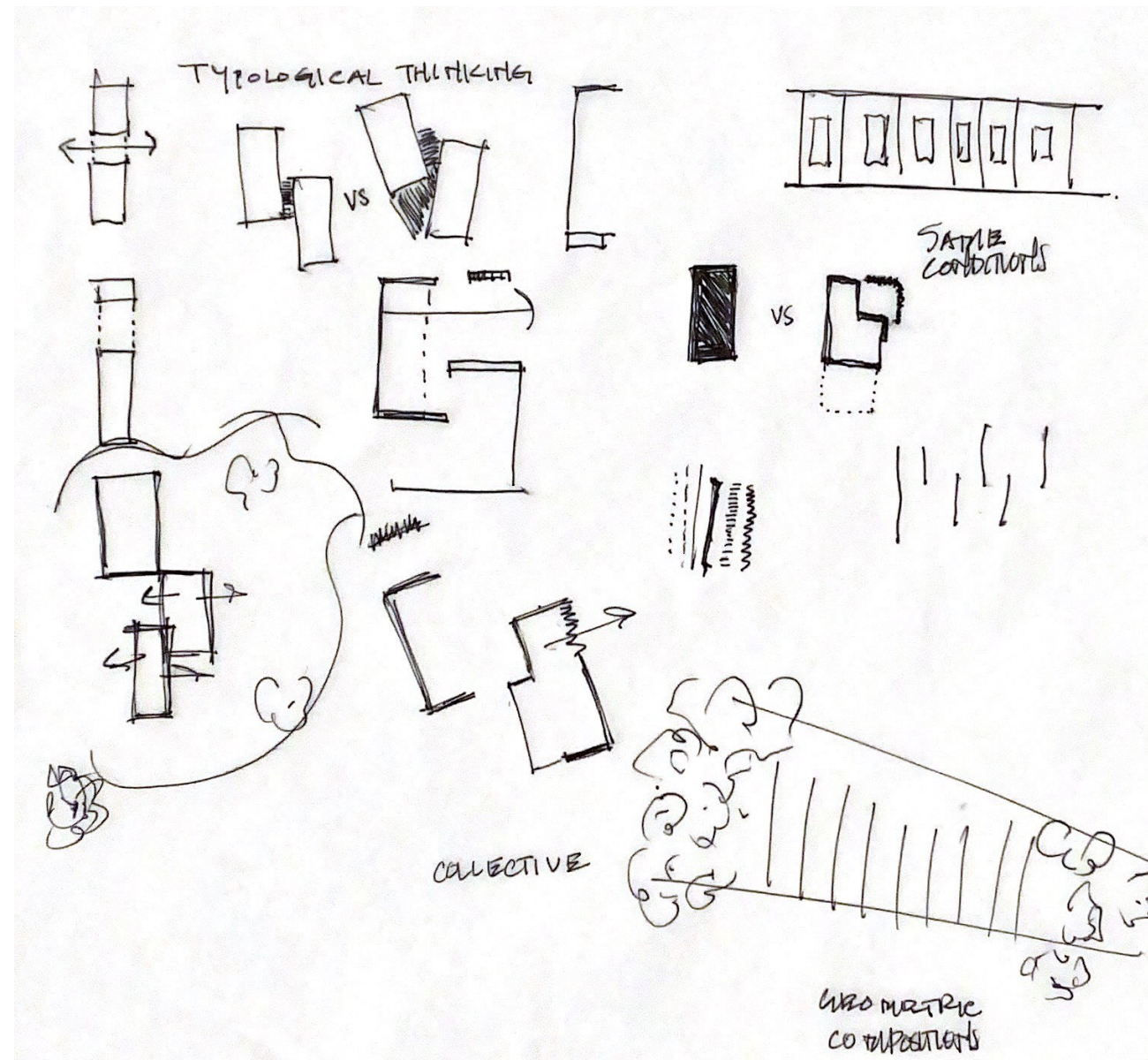
Brian Gibbs

Texas A&M University Department of Architecture, Assistant Professor of the Practice

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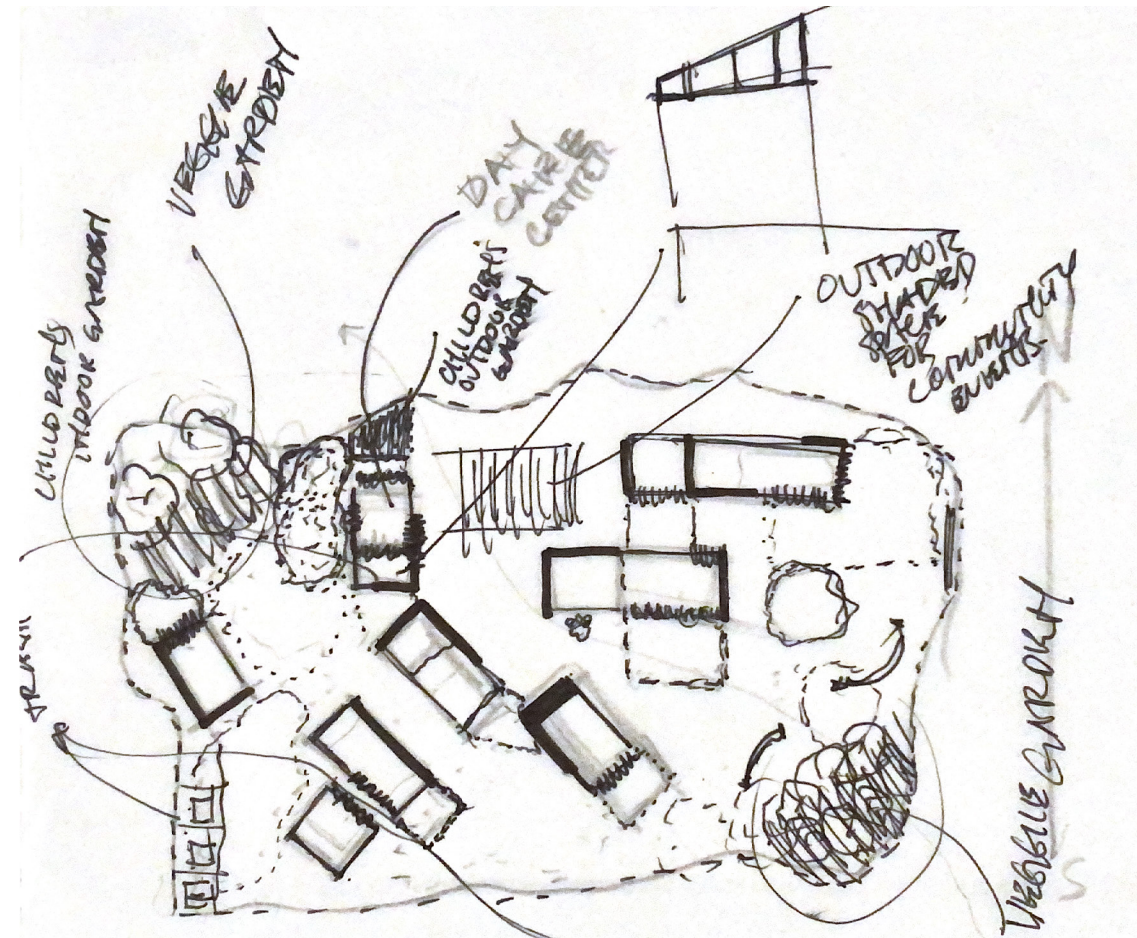
Introduction



"Architecture is a social act. The work of an architect is to do the work of consequence. Not forgetting artistry. We have to both engage and embrace political, economic, and social forces, but also embrace aesthetics."

Lorcan O'Herlihy, Architecture is a Social Act 2020

Living Together

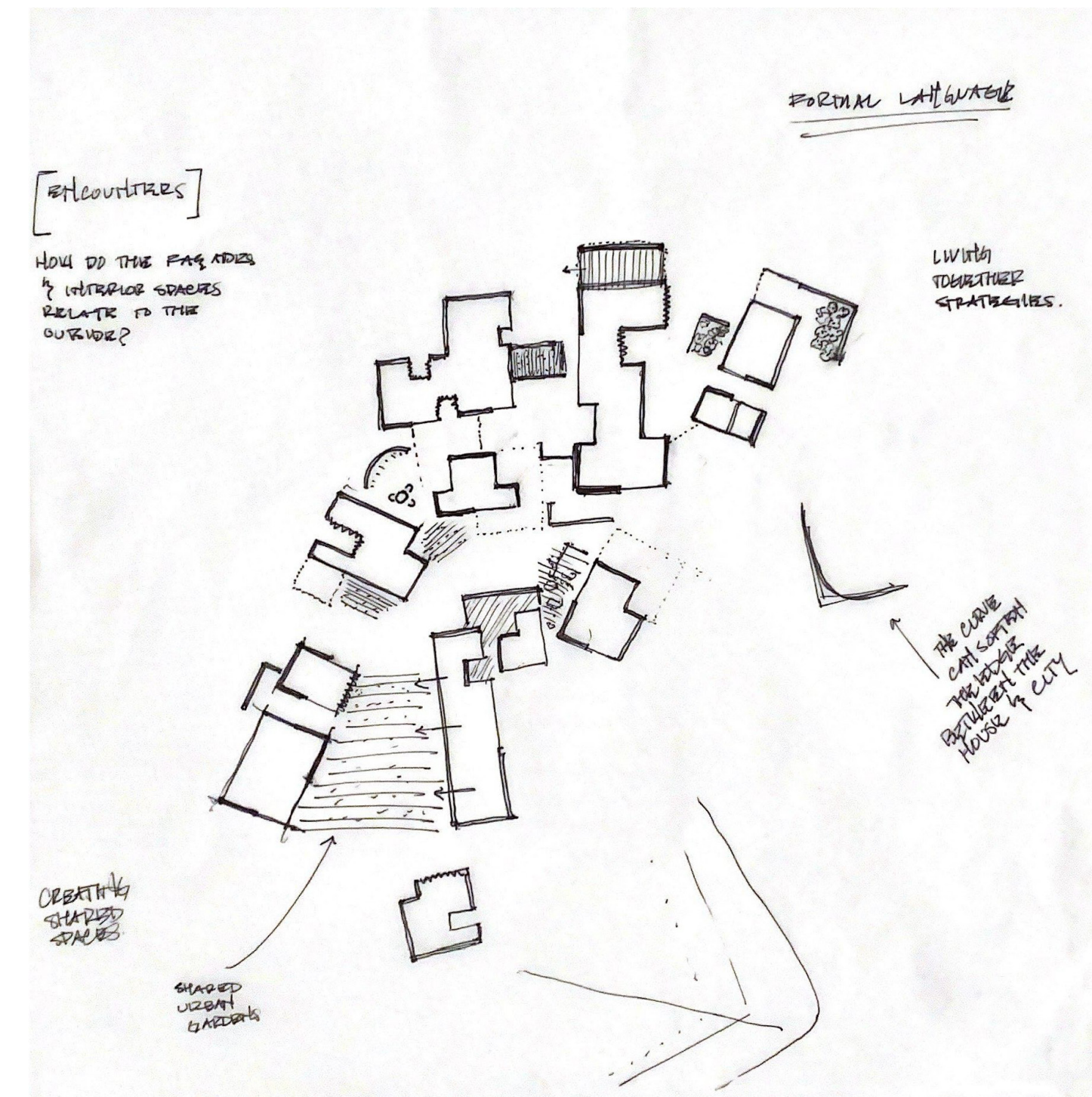


Thesis Statement

Architecture is about relationships. The inception of this project began by questioning how the current attitude of architectural density and lack of architectural diversity in the East Austin neighborhoods creates a generic neighborhood model. This current approach, among many other issues, eliminates the diversity of people, architecture, biodiversity, activities, and neighborhood relationships. As a way to engage in an open dialogue about the urgent need to imagine new ways of embracing density and architectural diversity with a deep care for the natural environment and existing ecology, how can we learn new ways of living together?

What kind of collective spaces make a sustainable life in a neighborhood?

The question is answered through an urban infill project in the Govalle neighborhood in Austin, Texas. It focuses on a design strategy that aims to help create opportunities for relationships at the neighborhood and urban scale while upholding human dignity and a thoughtful consideration for the natural ecosystem and wildlife. The design proposal includes residential units, varying from single detached units to multiple semi-detached units, as well as commercial spaces referred to as bookends that act as anchor points for the site. Further, there is a connection to the Colorado River and the Colorado River Park Wildlife Sanctuary through an ecological public space proposed for the vacant lot located across from the site. The urban neighborhood strategies integrating accessible shared spaces within the arranged units and existing neighborhood conditions are aimed to be tested at different sites throughout the neighborhood.



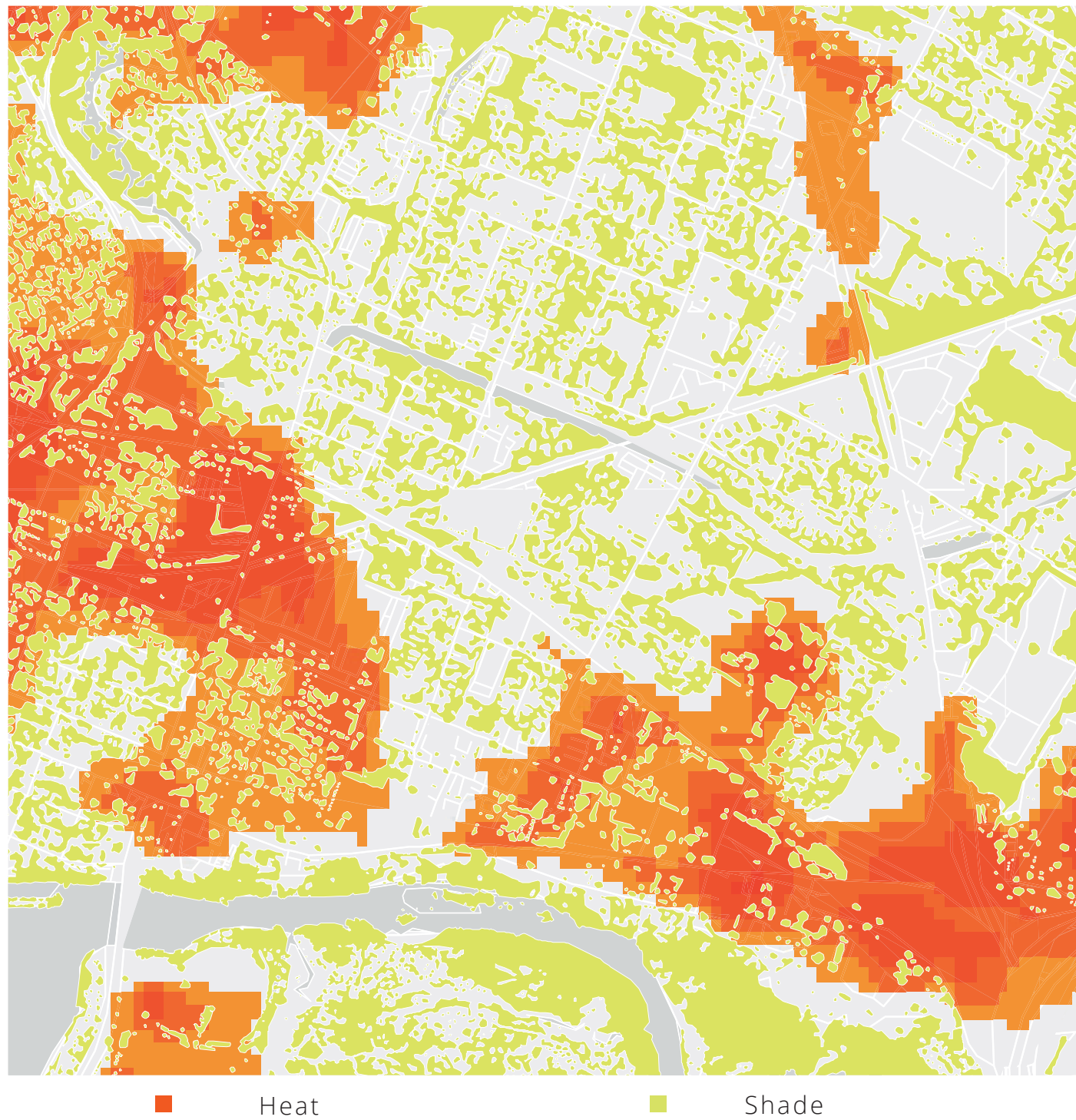


Austin, Texas United States



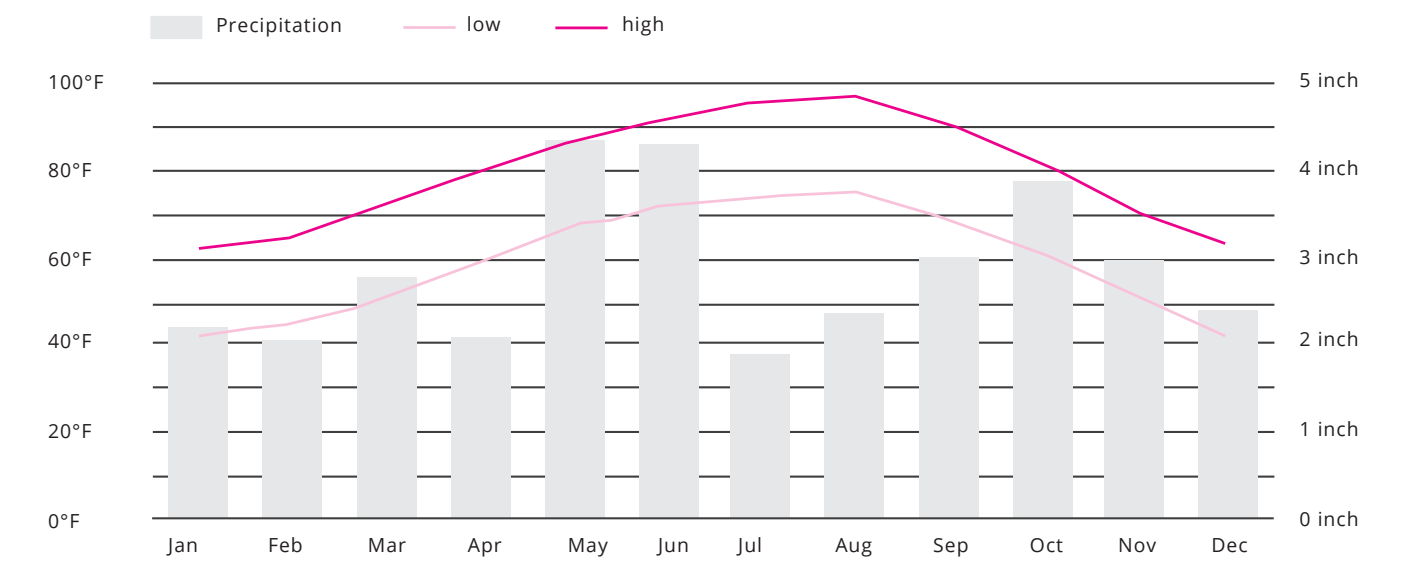
Figure Ground Map





Given the existing urban heat island effect observed in Austin, Texas, the design strategies were mindful of the impacts of material choices, structural strategies, and surface textures, with the aim of designing with a caring approach toward the present and future condition of our environment.

Austin, Texas Yearly Climate Chart



Travis County Climate Zone	2A
Climate Zone 2A	Hot Humid
Zone A	Moist
Average Rainfall	35.5 inches per year







■ Red Line
 ■ Green Line
 ■ Bike Trails

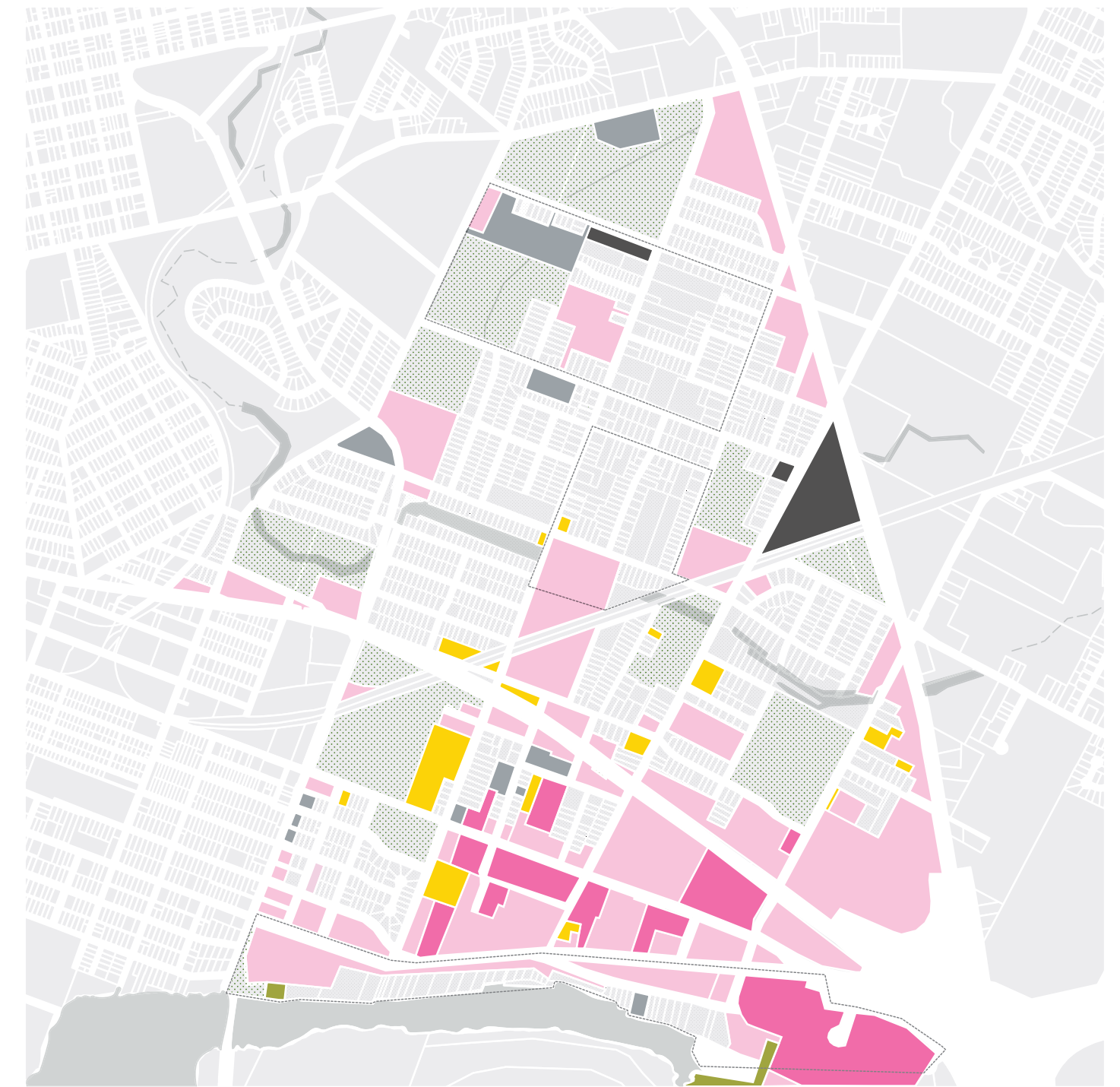


■ City of Austin
 ■ LLC, LP, LTD
 ■ Non-Profit Organizations



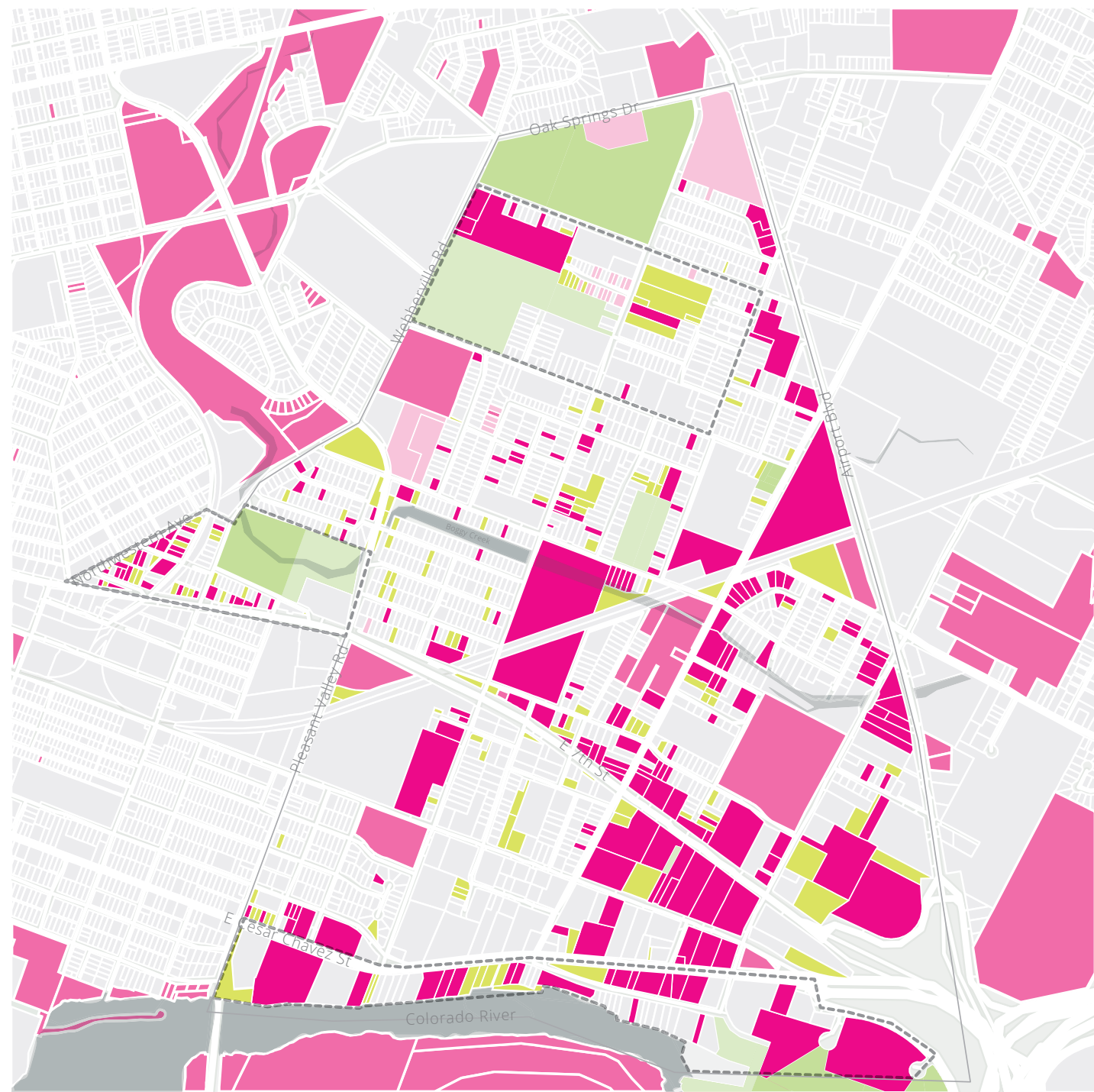


■ City of Austin
 ■ Vacant

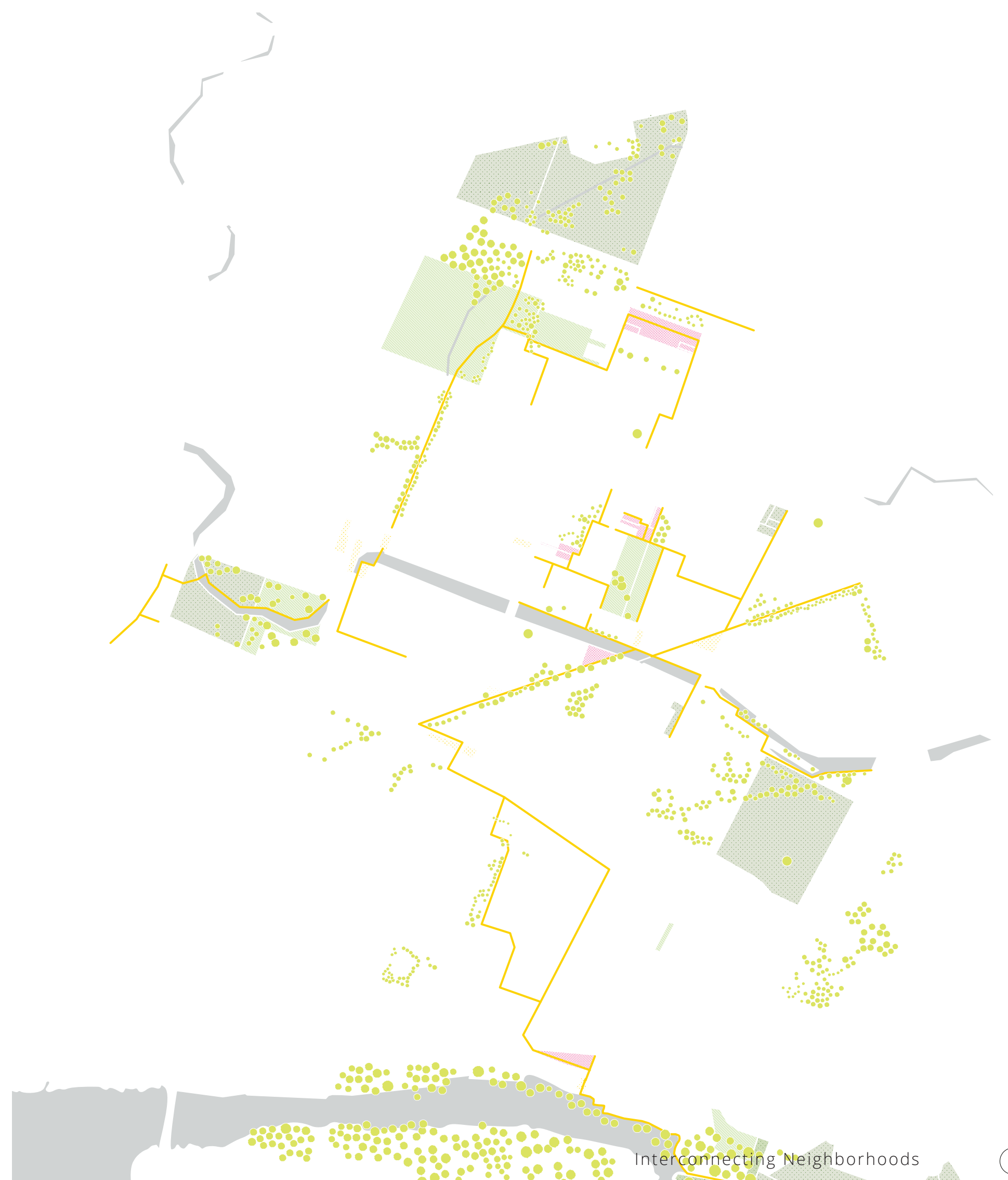


■ Rural
 ■ Industrial
 ■ Multifamily
■ Community Commercial
 ■ Neighborhood Commercial
 ■ Project Development





- City of Austin
- LLC, LP, LTD
- Non-Profit Organizations
- Vacant
- Parks
- Land Used For Farming



Distributed Sites

site no. 1



site no. 5

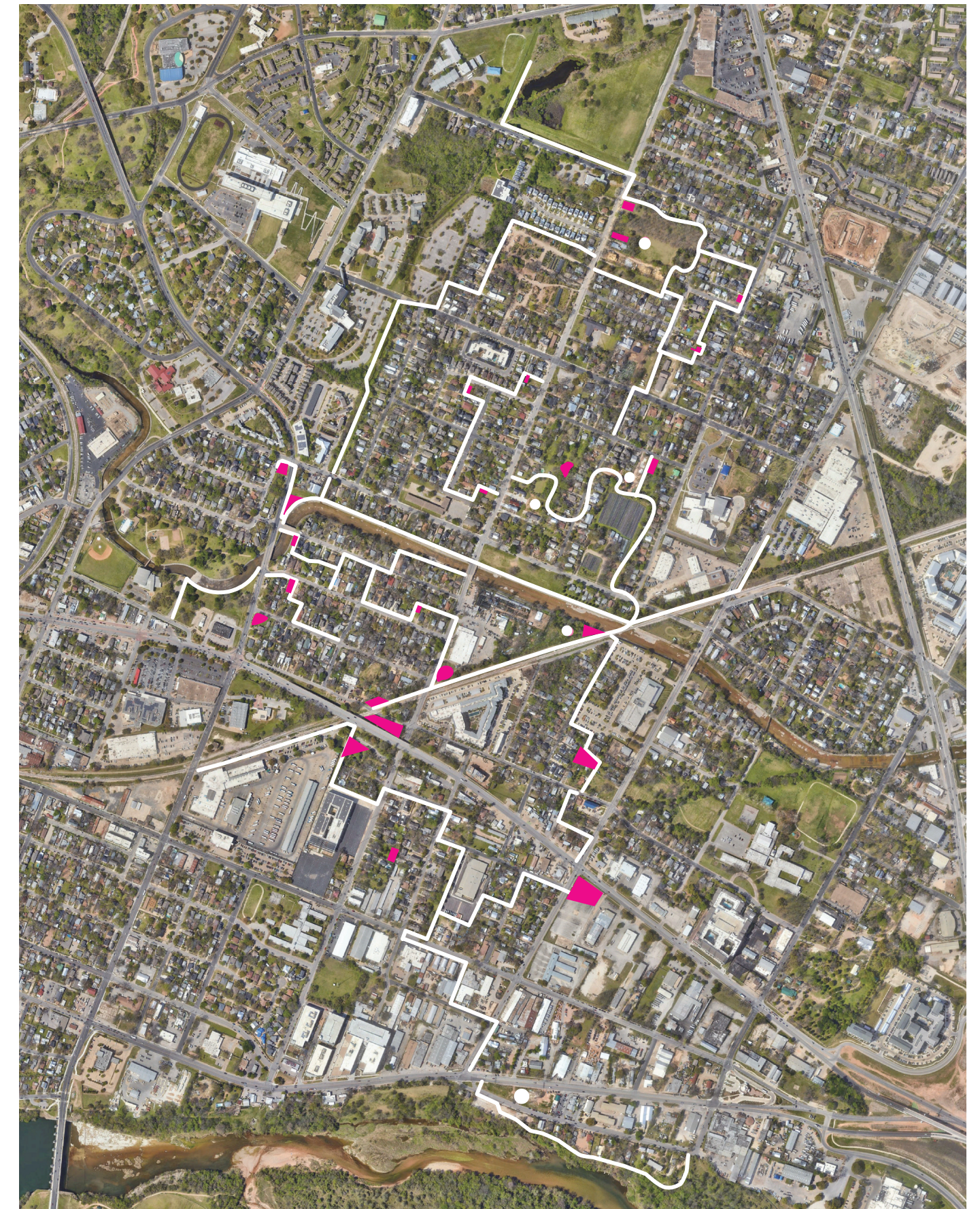


site no. 3

site no. 2



site no. 4



The urban housing proposal is conceived as a strategy that is tested across multiple sites selected in the Govalle neighborhood. Through an analysis of existing ecological features and neighborhood accessibility and vacancy, a total of five different sites were selected. The five sites are conceptualized, through an urban strategy, to have the opportunity to be threaded and connected throughout the neighborhood using public paths, water features, ground textures, and common public spaces.

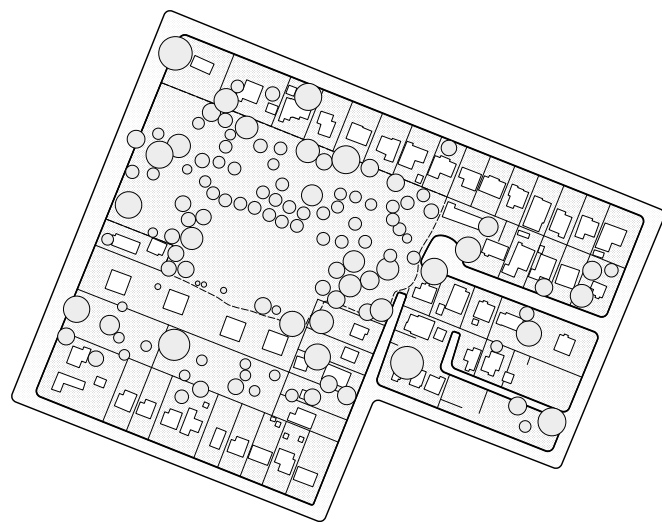


It was critical to determine the proposal of the project as a strategy that is tested across different conditions and non conforming lots, working with intentionality to design opportunities that promote neighborhood relationships at different scales. As a response to the site's urban conditions and ecological conservation, there is a proportional strategy of vacant or empty lots to be preserved as informal green spaces and those that are used as inhabitable structures to create a sense of belonging in the neighborhood.



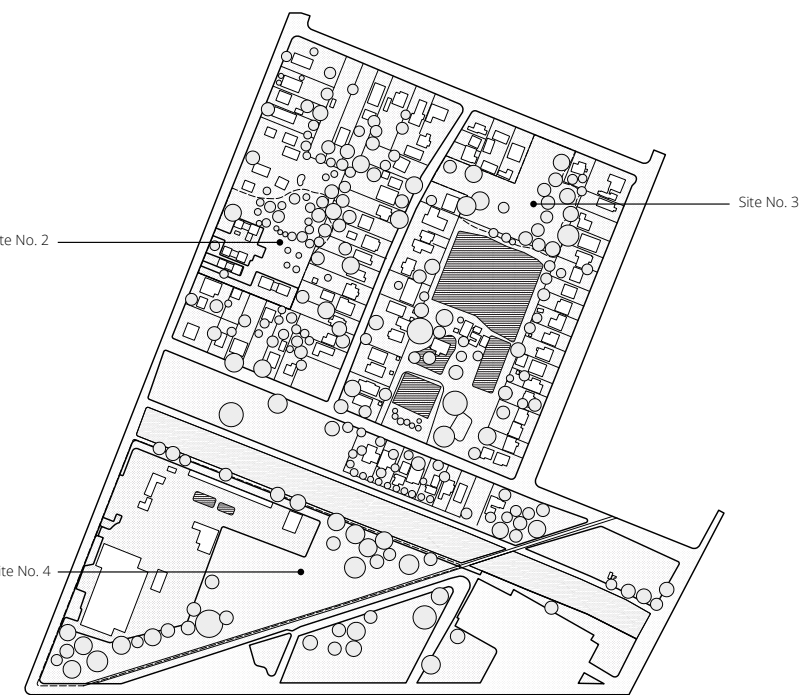
Site No. 1

Vacant lots in the neighborhood were explored to test strategies that could enhance the neighborhood by asking, what kind of collective spaces make a sustainable life in a neighborhood? The ambition was to seek strategies to build on the existing urban fabric and create a more collective and connected neighborhood. Conserving the ecological features of the sites and the architectural design was not thought of as a fragmented strategy. Instead it was critical to answer the question of how we can create new ways of looking at how people, architecture, and ecosystems can live together.



Site No. 2, No. 3, No. 4

The Govalle neighborhood is located in an area of East Austin that has not yet been completely altered by the gentrification scene present throughout other areas of East Austin. Conceived as an urban infill proposal, all of the five sites are located within a one mile radius of each other. The sites were all selected for the neighboring existing ecological features and proximity to the existing urban fabric, such as parks, farms, plant nurseries, and other public spaces.





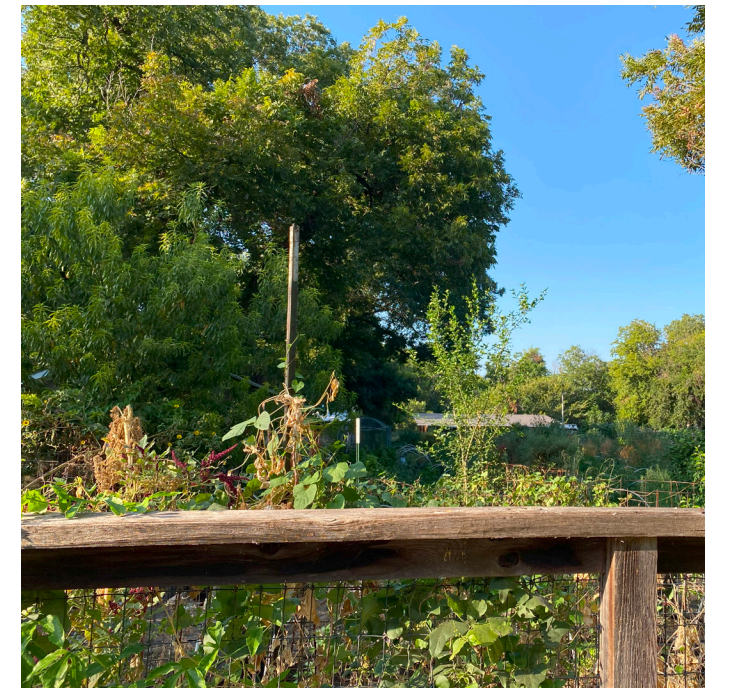
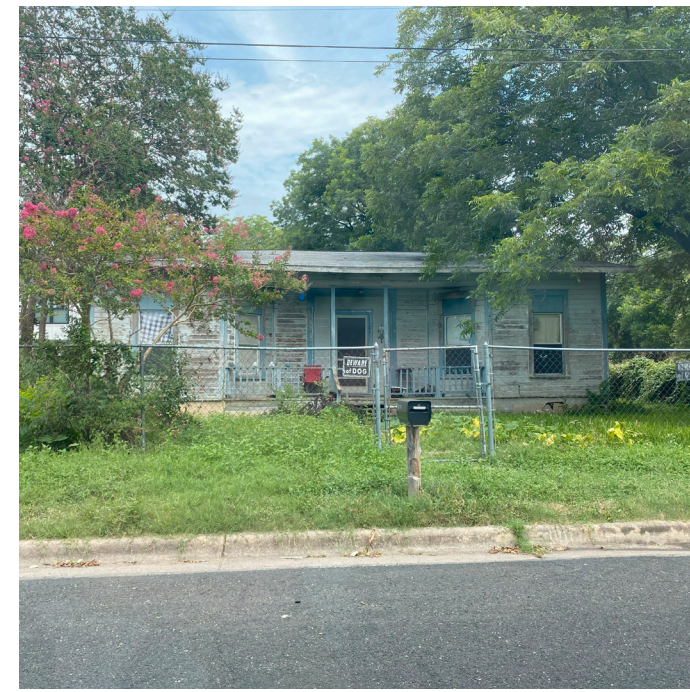
Site No. 5

Although the thesis is questioning housing design strategies that can be tested across multiple sites, the complete design proposal will be presented in site no 5. Site no. 5 is located on East Cesar Chavez St, which is one of East Austin’s busiest urban streets. Further, the site is located at an intersection of multiple zoning districts including an industrial zone, commercial zone, and residential zone.

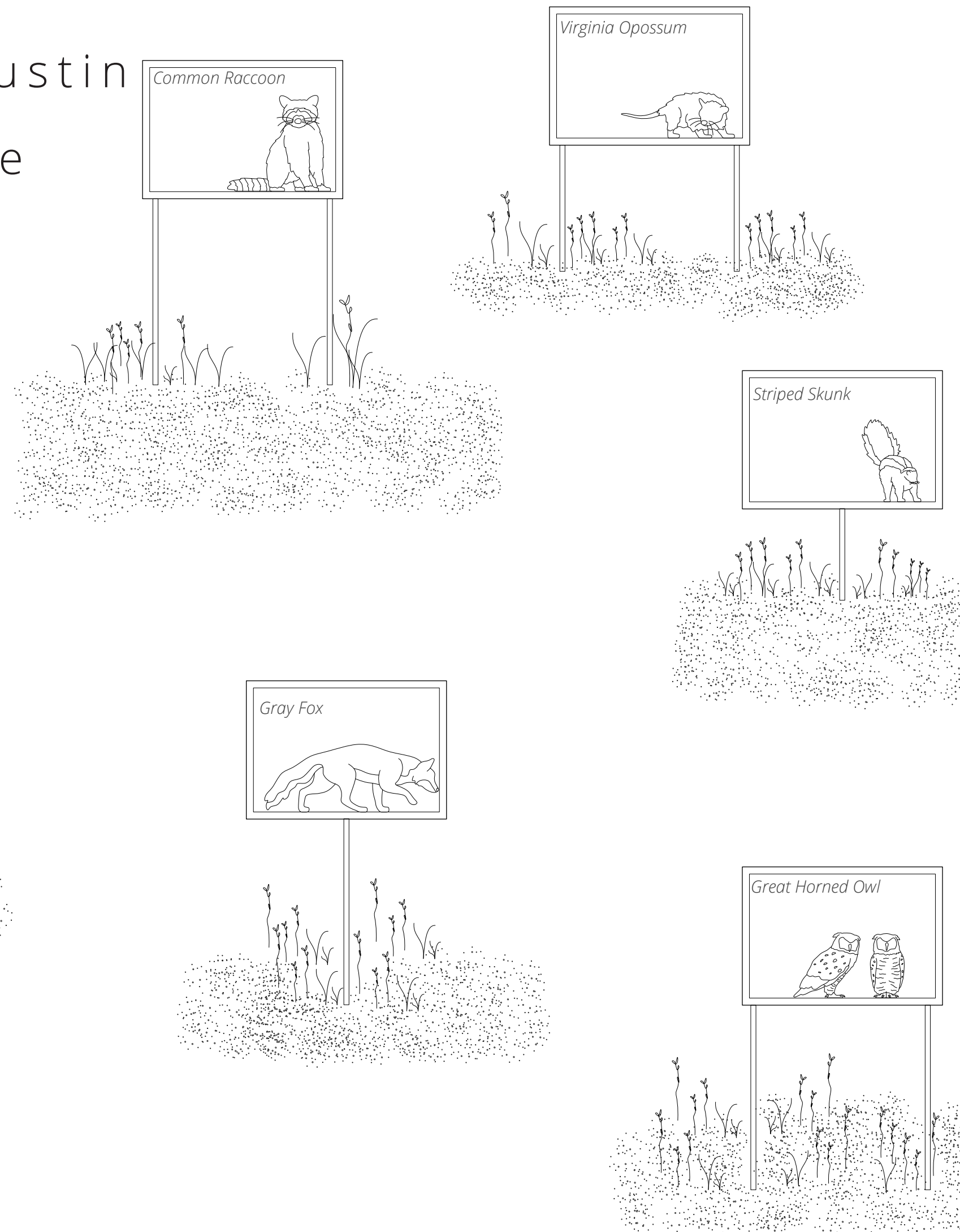


Address	4713 E Cesar Chavez St
Zoning Code	CS-MU-CO-NP
Base Zoning District	CS-General Commercial Services
Combining & Overlay Districts	MU- Mixed Use Combining District CO- Conditional Overlay Combining District NP- Neighborhood Plan Combining District
Calculated Acres	1.08842
Estimated Parcel Sq Ft	47,413





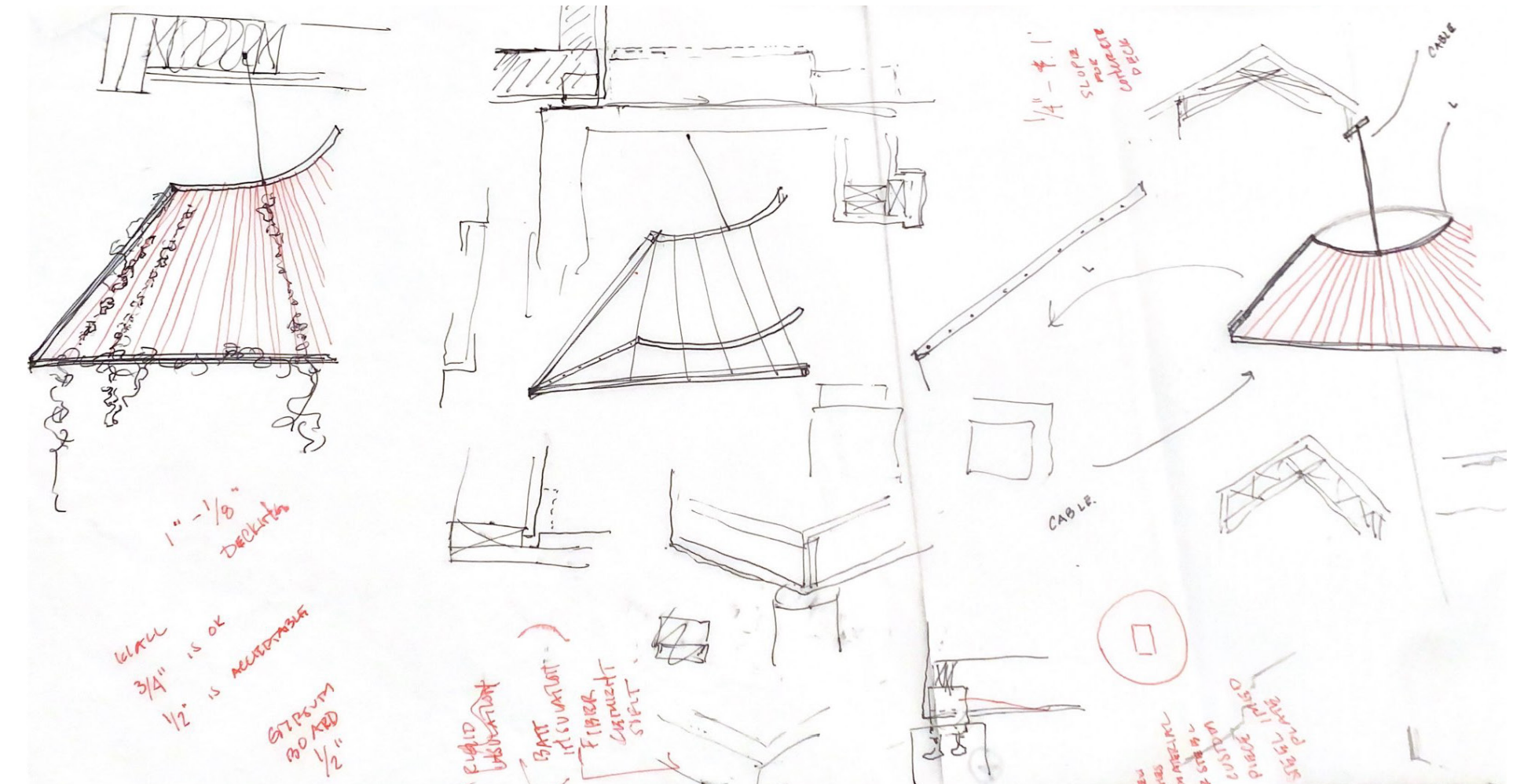
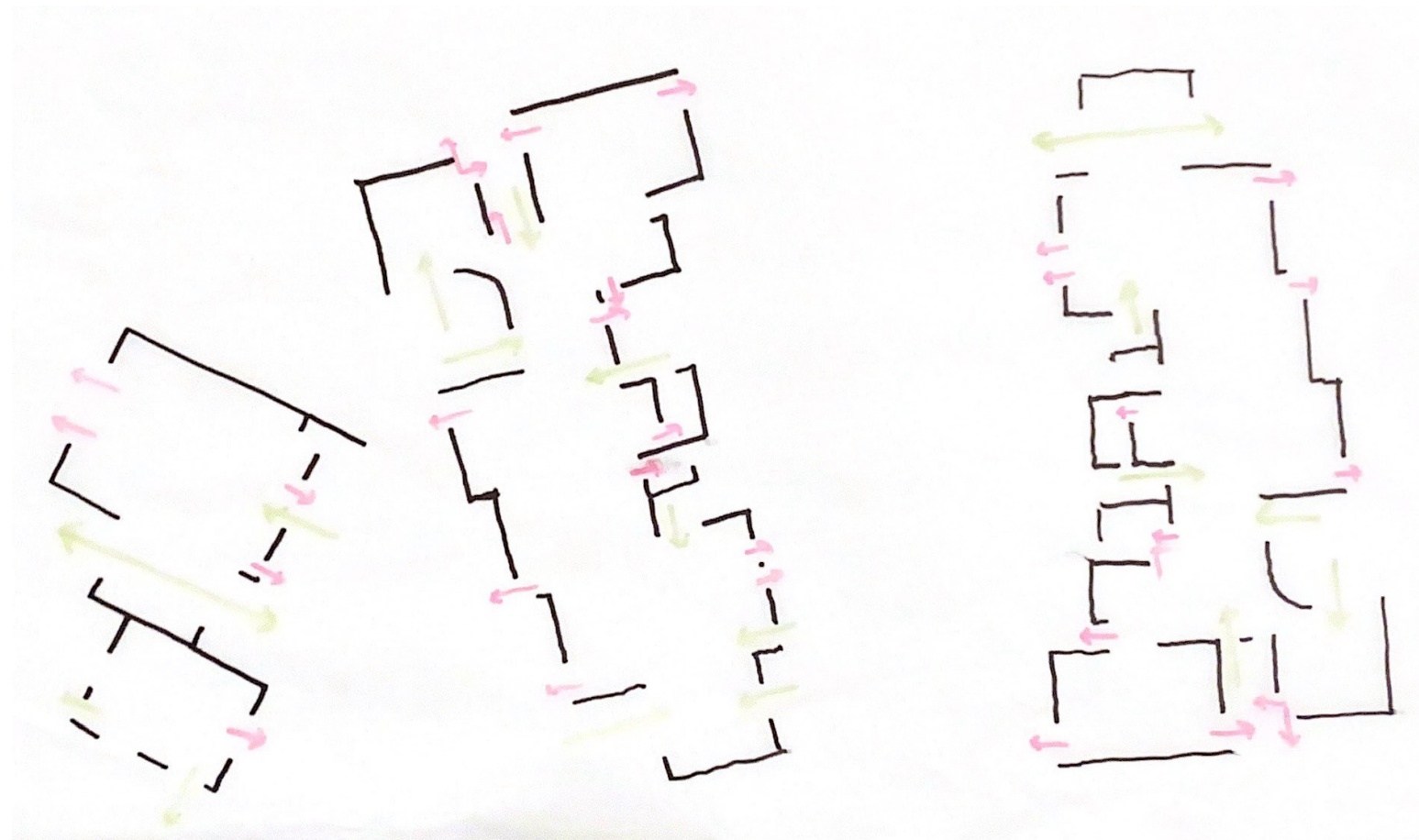
East Austin Wildlife



Given the proximity to the Colorado River and the urban setting of the site, various non-human wildlife species inhabit the area. Some of these non-human neighbors include foxes, possums, owls, skunks, raccoons, native birds to the area, and bats.

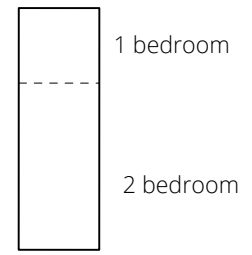
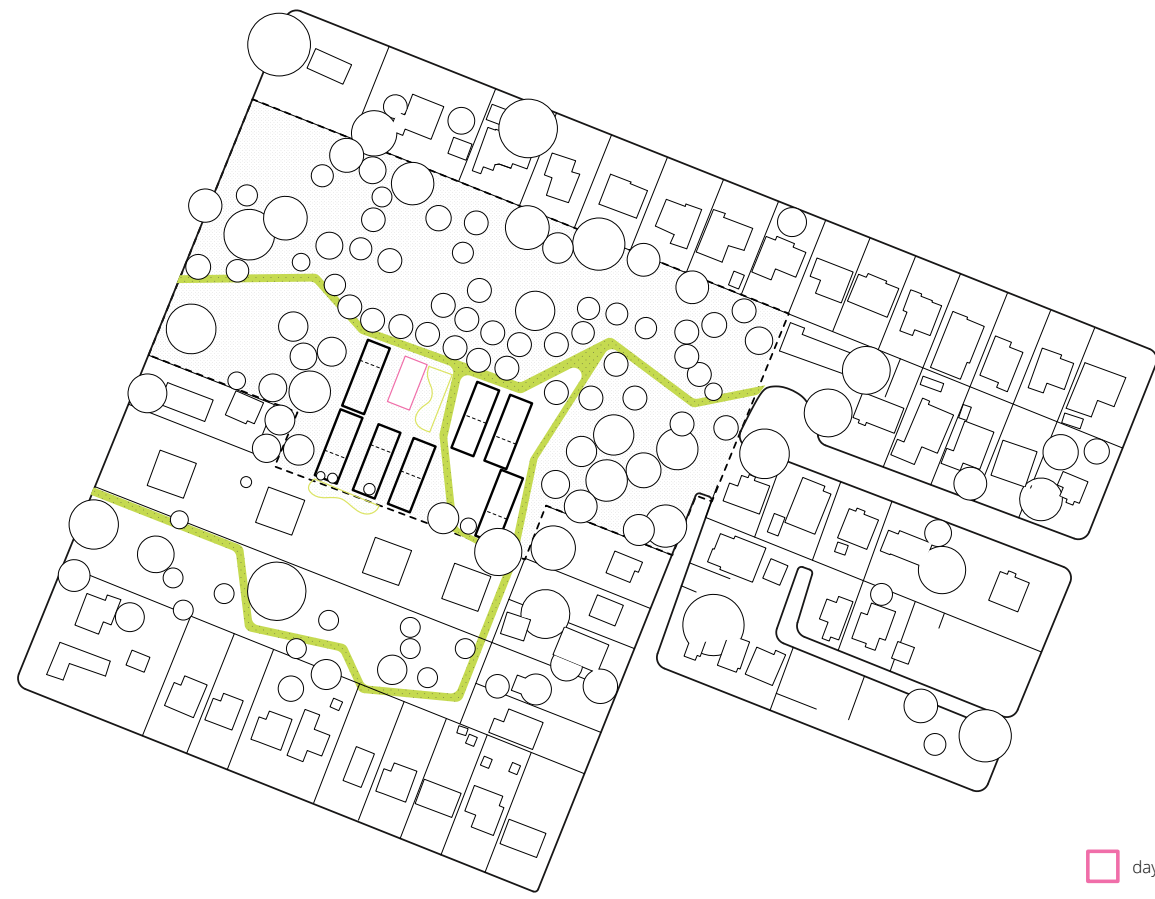
To foster coexistence with these non-human neighbors, I propose several elements throughout the project. These elements include artificial owl nests, water features for critters, underground passage for wildlife between the urban park and the site, placing informational plaques about local wildlife, and implementing low lighting throughout the site to reduce hazards for birds. Additionally, the use of non-reflective glass windows is proposed to help prevent bird collisions with windows and doors.

Design Process

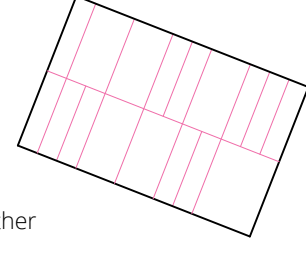
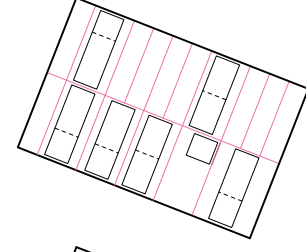
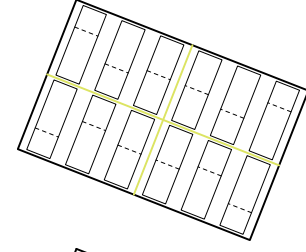
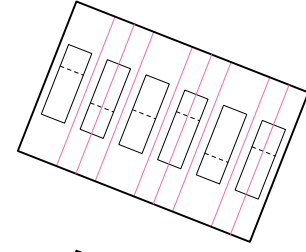
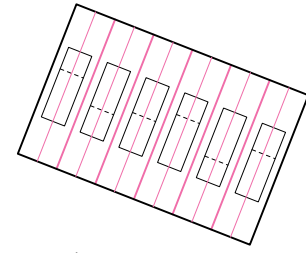
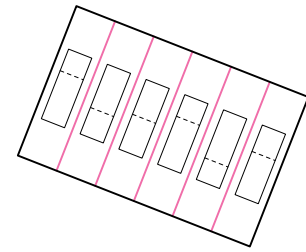


Thinking of the city as an aggregation of activities and living spaces influenced the design process to consider elements within the house that bring a piece of the outside world indoors. This design approach prioritizes sensitivity, kindness, and the generosity of spaces, aiming to create new and diverse living conditions.

Site A Iteration 1

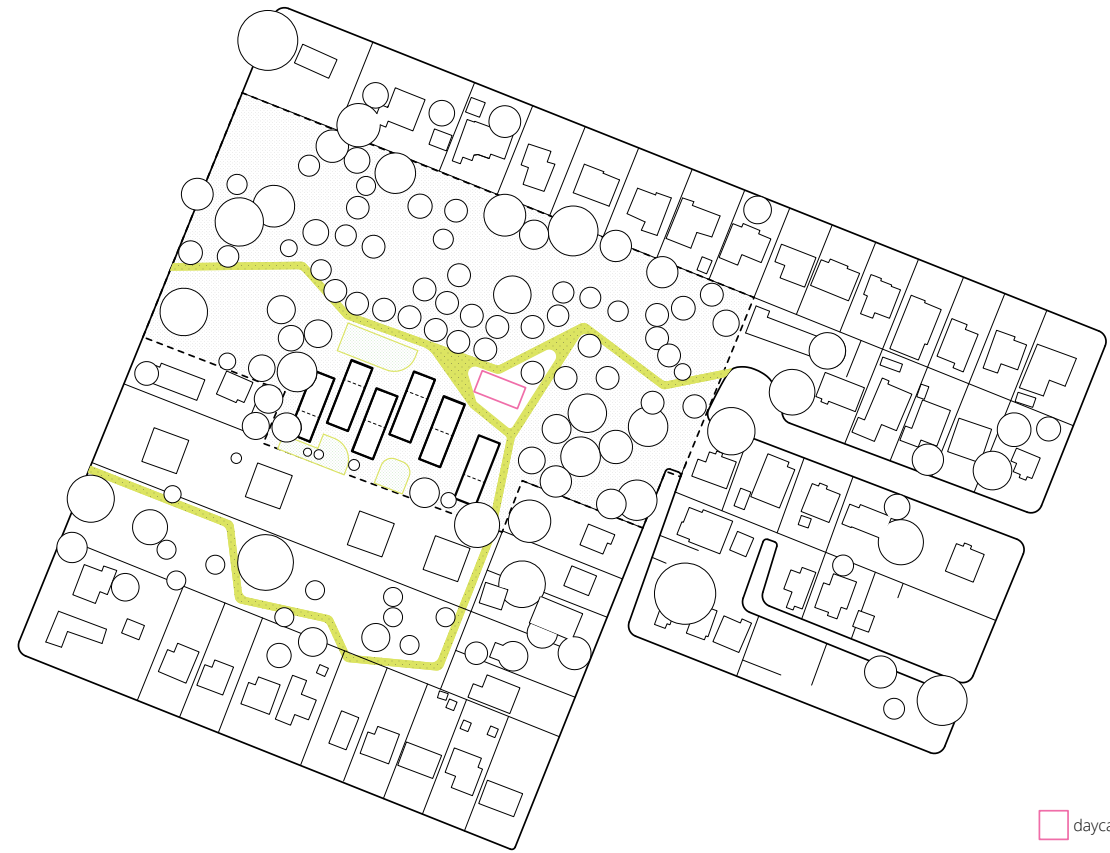


daycare center

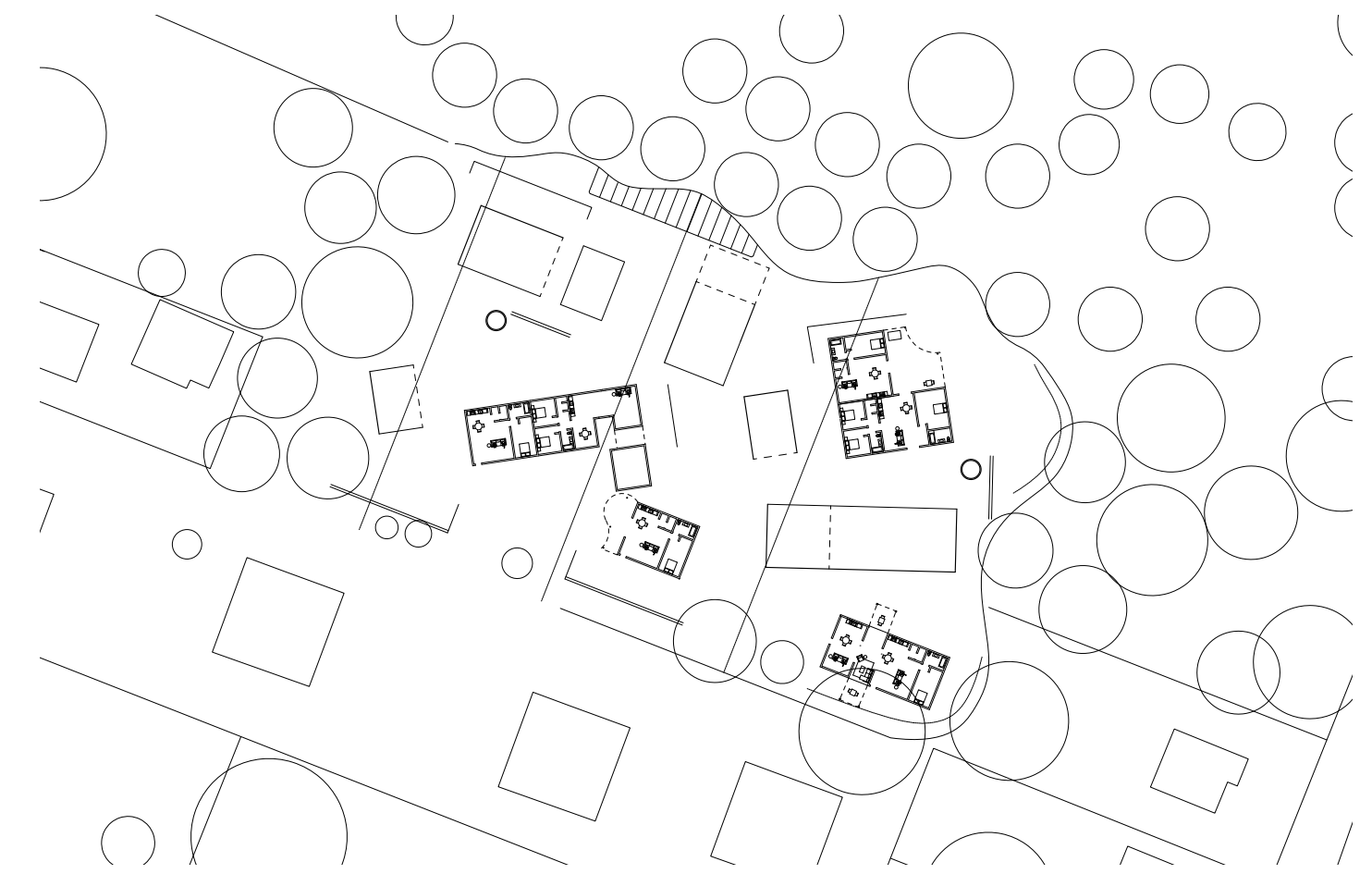
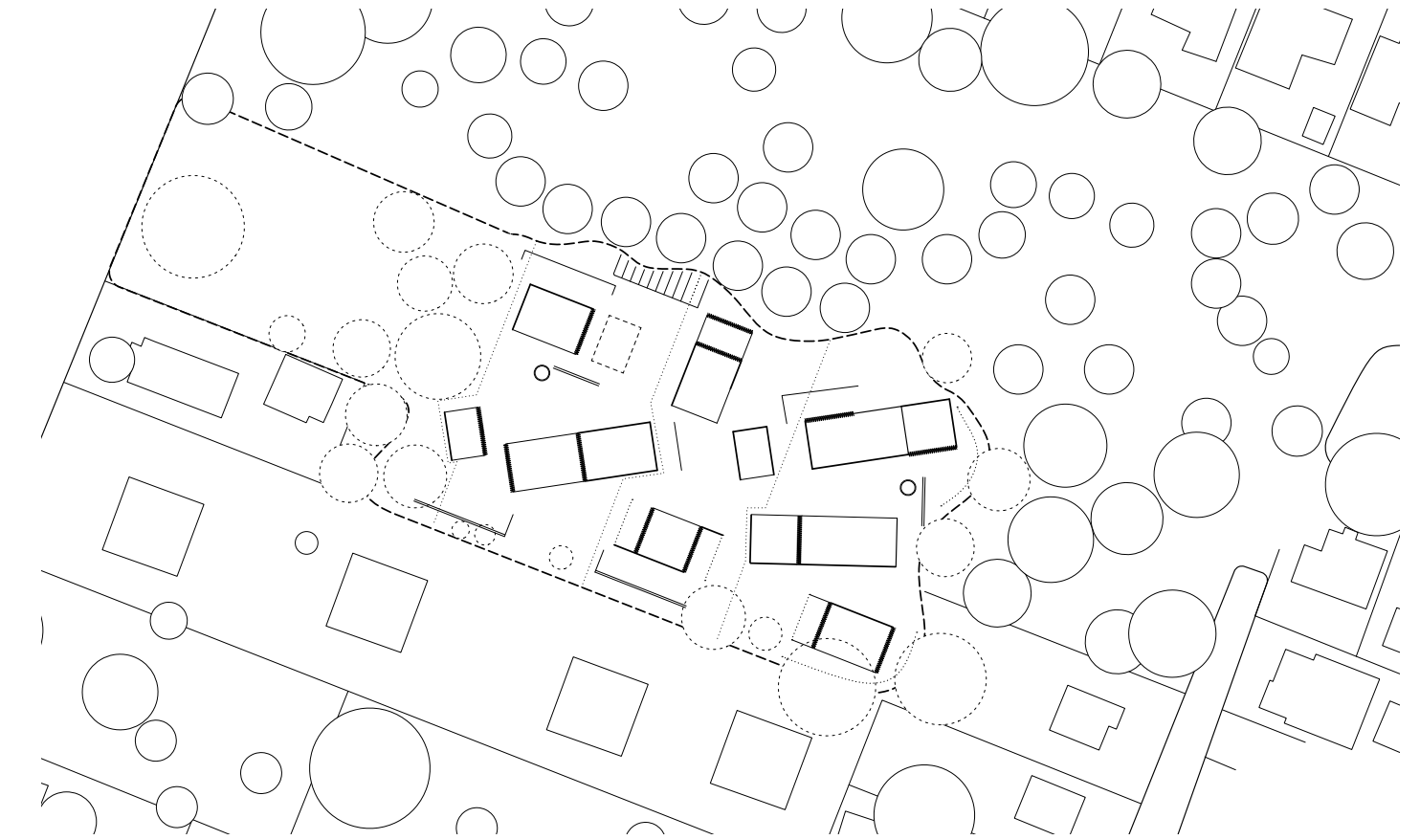


Site A Strategy: Seperate but Together

Site A Iteration 2

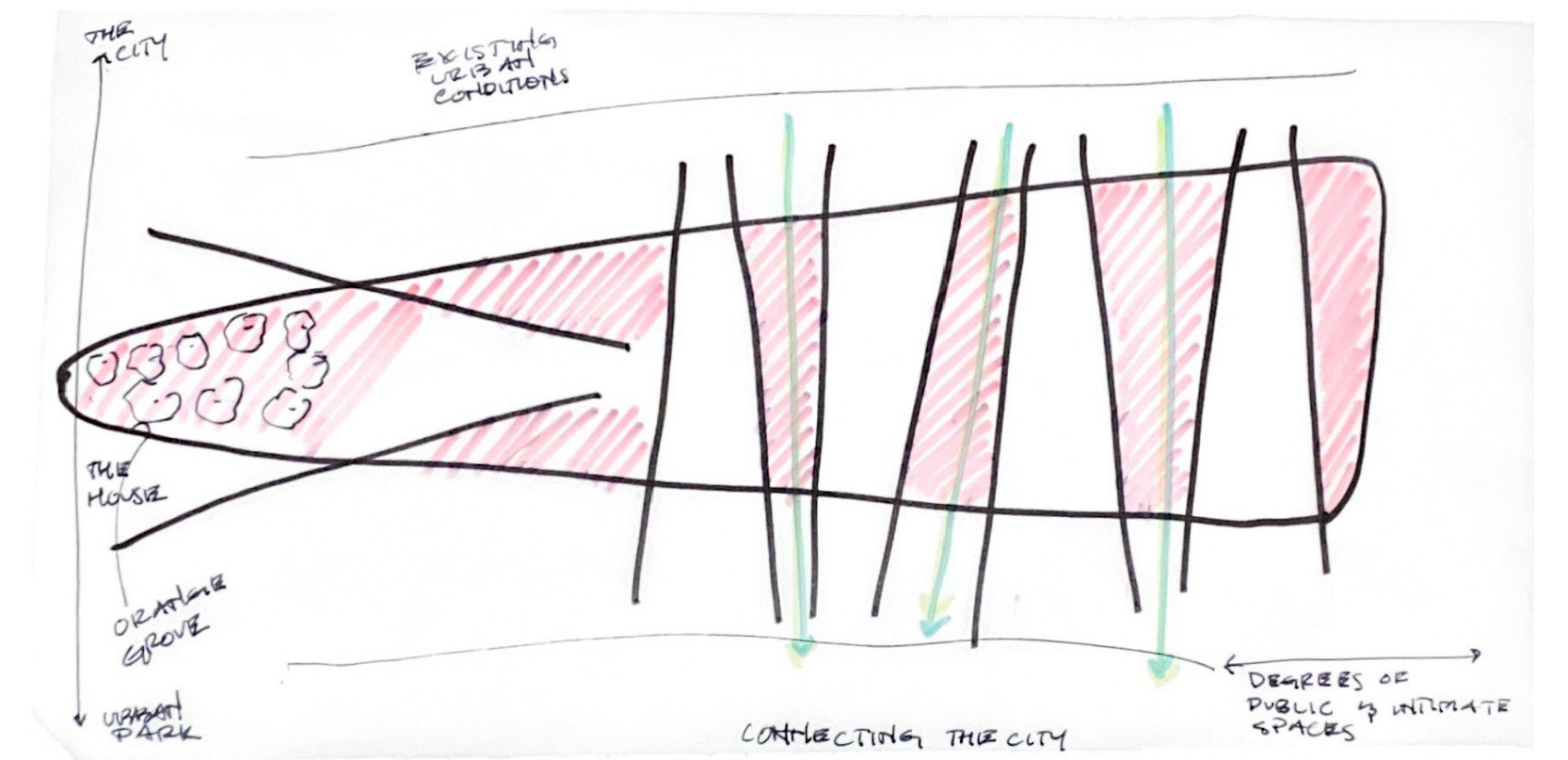
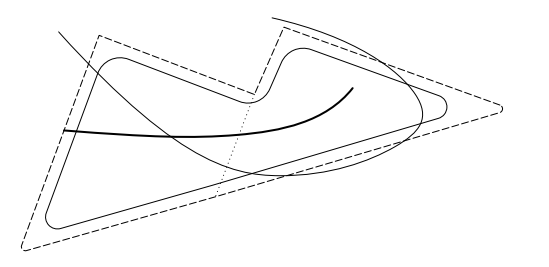
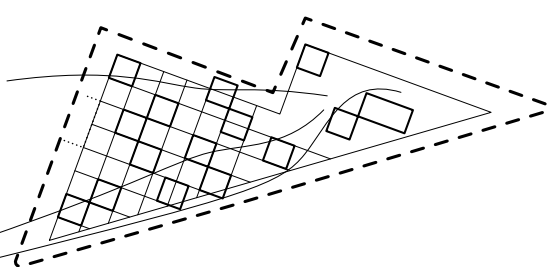
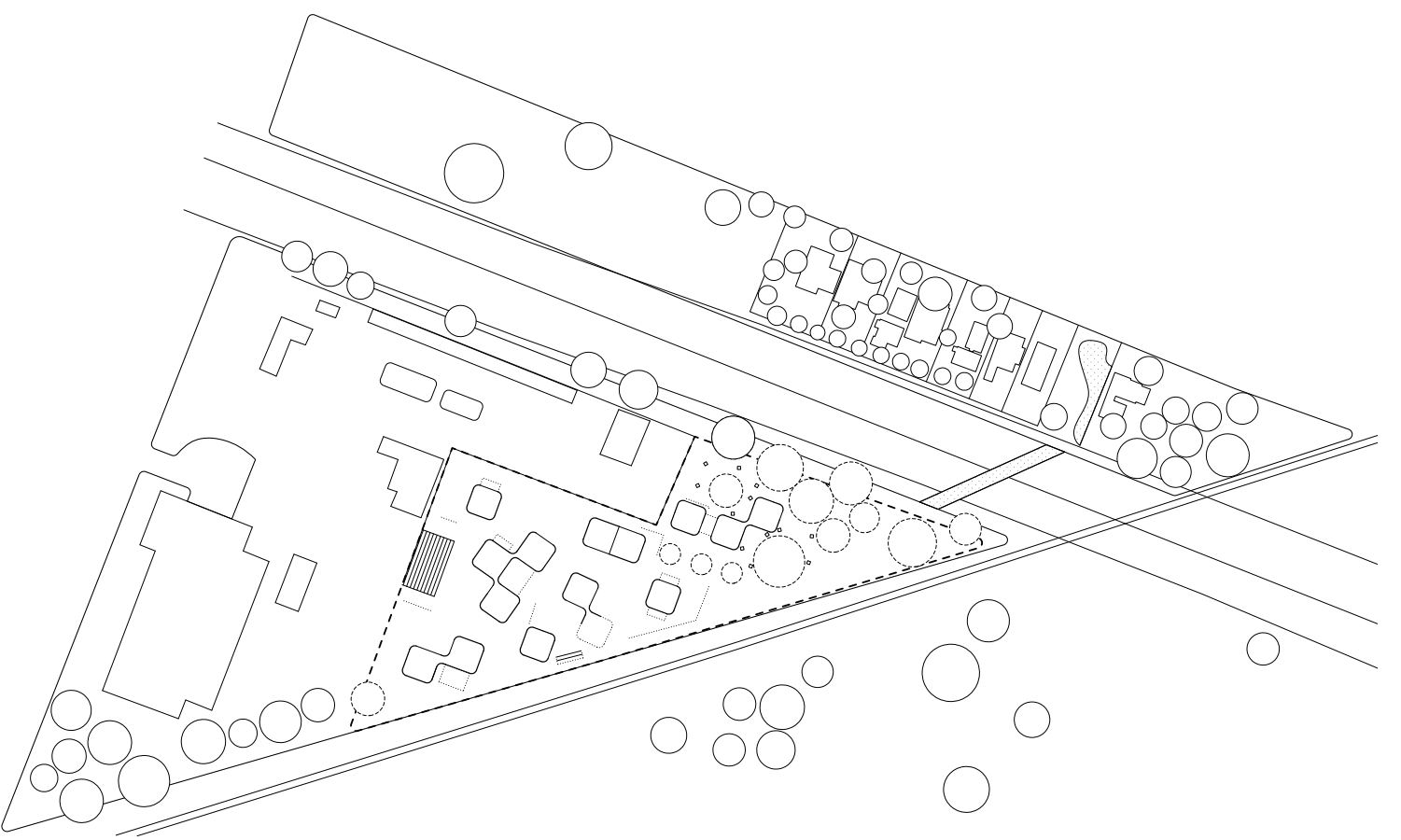
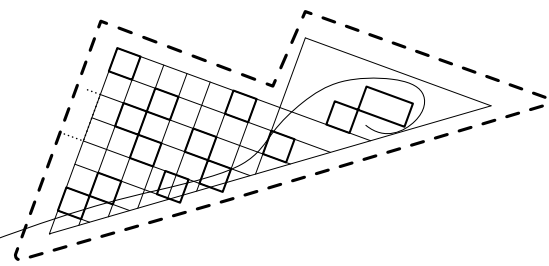
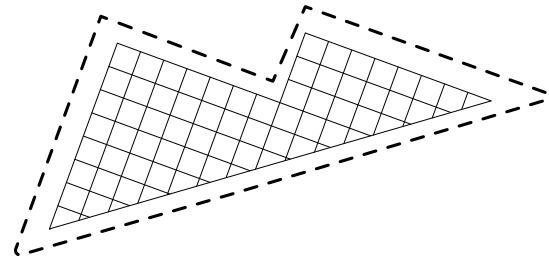
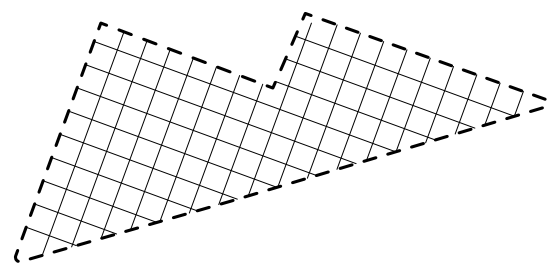
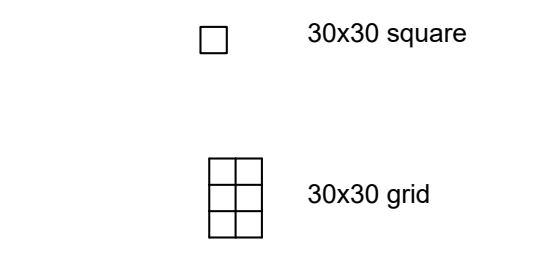
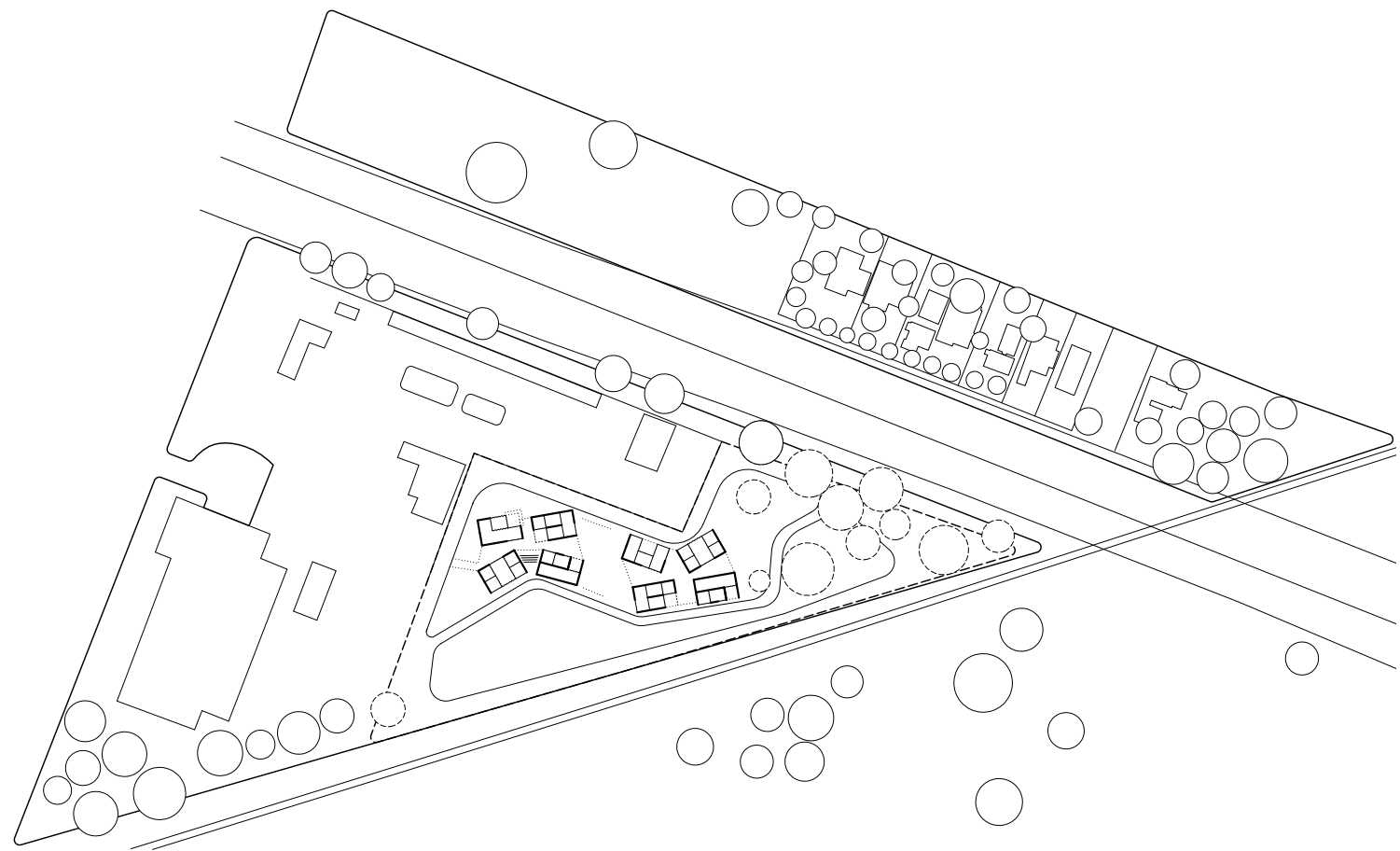


daycare center



Site Strategy Iterations





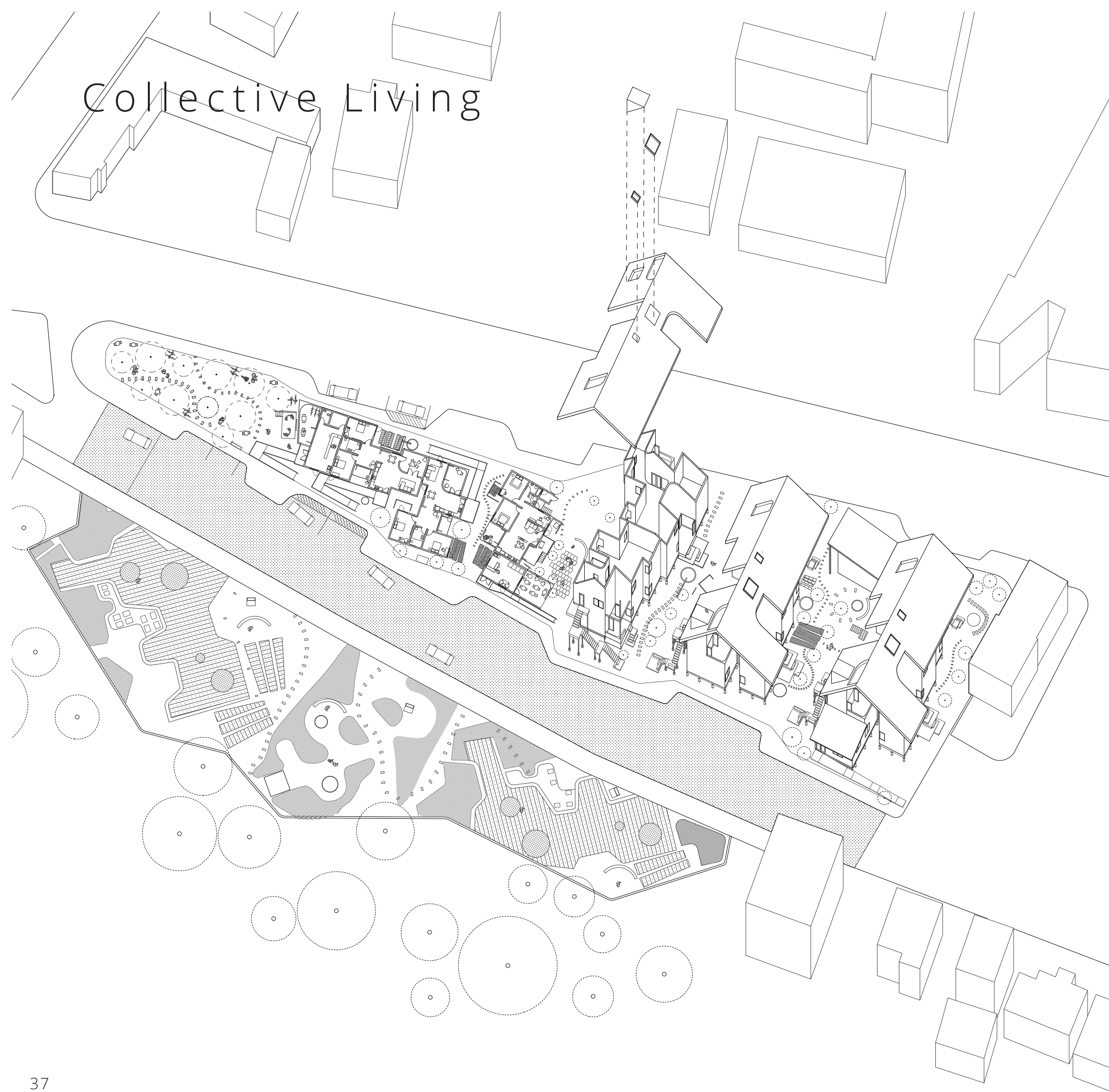
Site No. 5

"A diagram is not a thing in itself, rather a description of potential relationships among elements" - Stan Allen

Considering connections, relationships, boundaries, and various urban layers were essential aspects of the typological thinking during the design process.

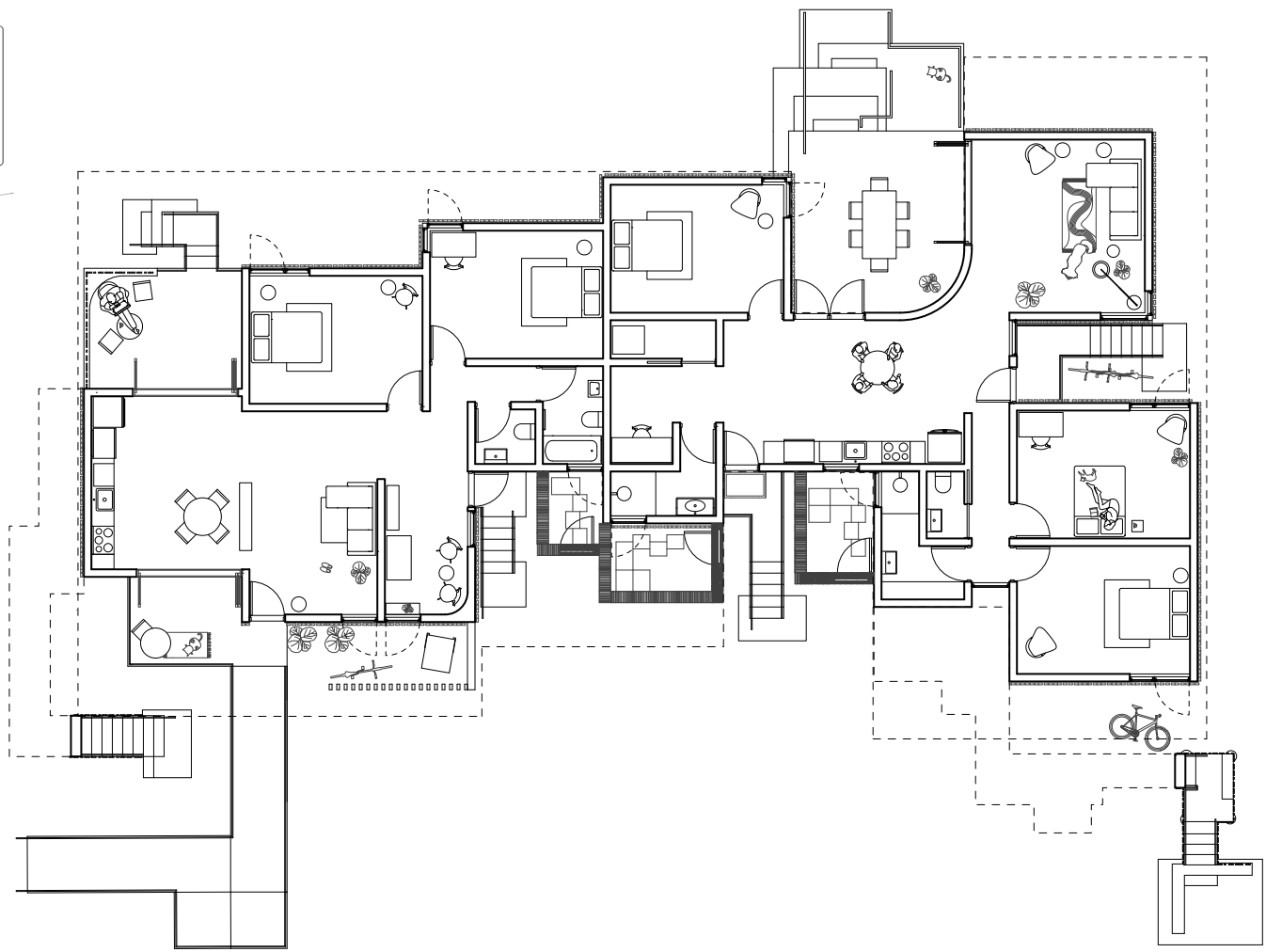
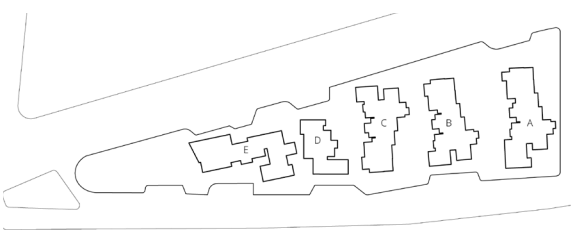


Collective Living

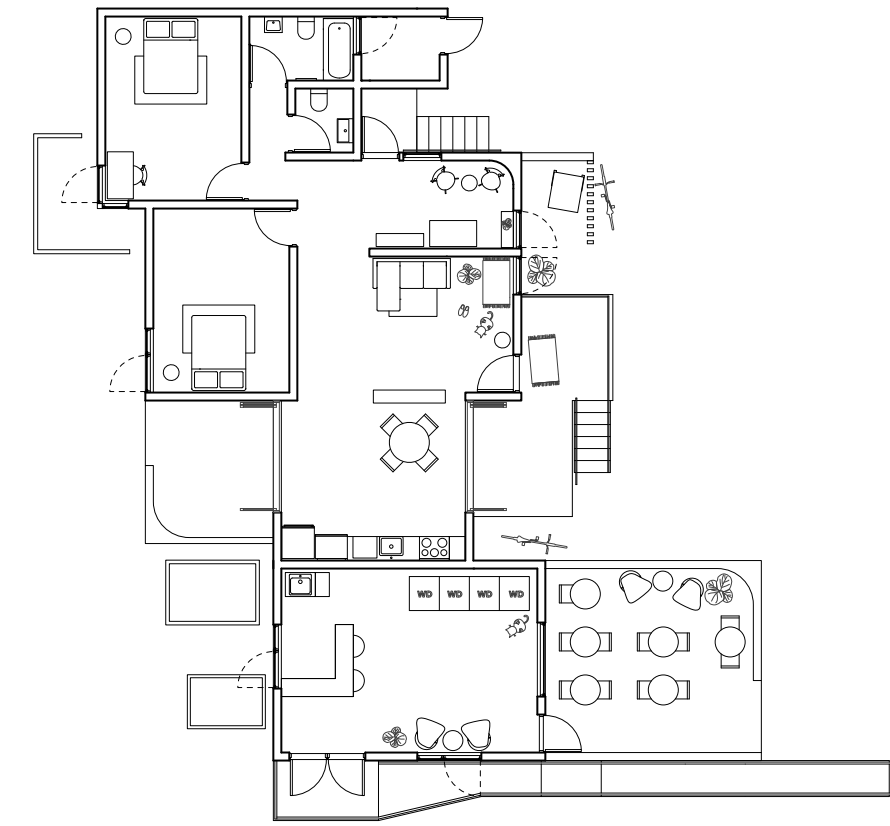


The series of housing prototypes challenge the single family detached lot to begin re-imagining more dense living without compromising individuality. The design of the housing units also speculate on adaptability to inhabitants' needs and changing life circumstances. The ambition of the proposal in site No. 5 was to imagine the dwelling units being able to be expanded as needed throughout the site. The structural strategy of the pier and beam grid allows for the addition of units to be configured or expanded as needed or when financial variables allow. The aim is for the structure to provide a framework that promotes repetition, flexibility, and adaptability. The neighbor to neighbor relationships between the housing units and existing structures were critical to the project. The spaces in between the dwelling units produce courtyards, shared spaces, and public open spaces at the urban scale.

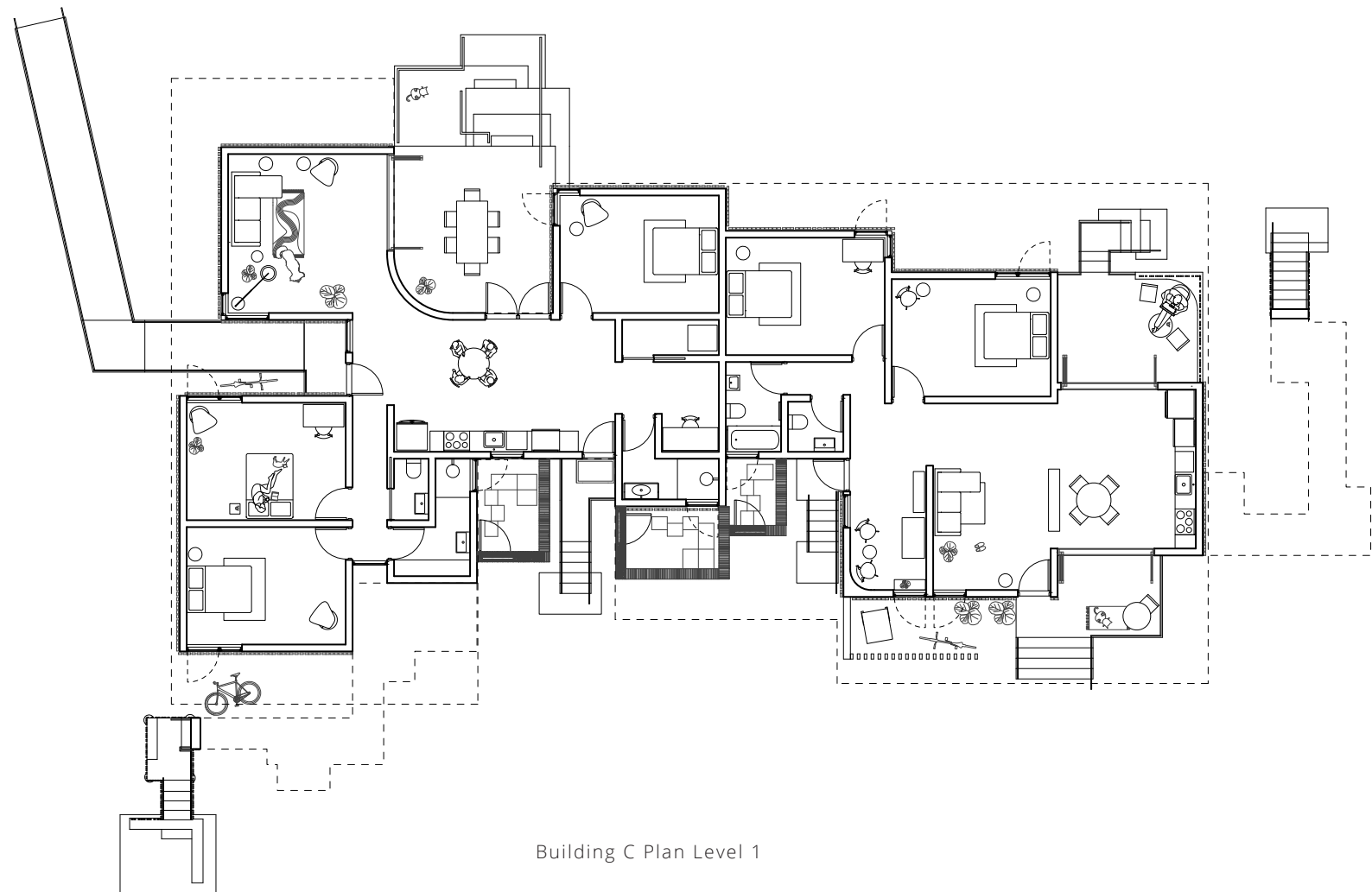




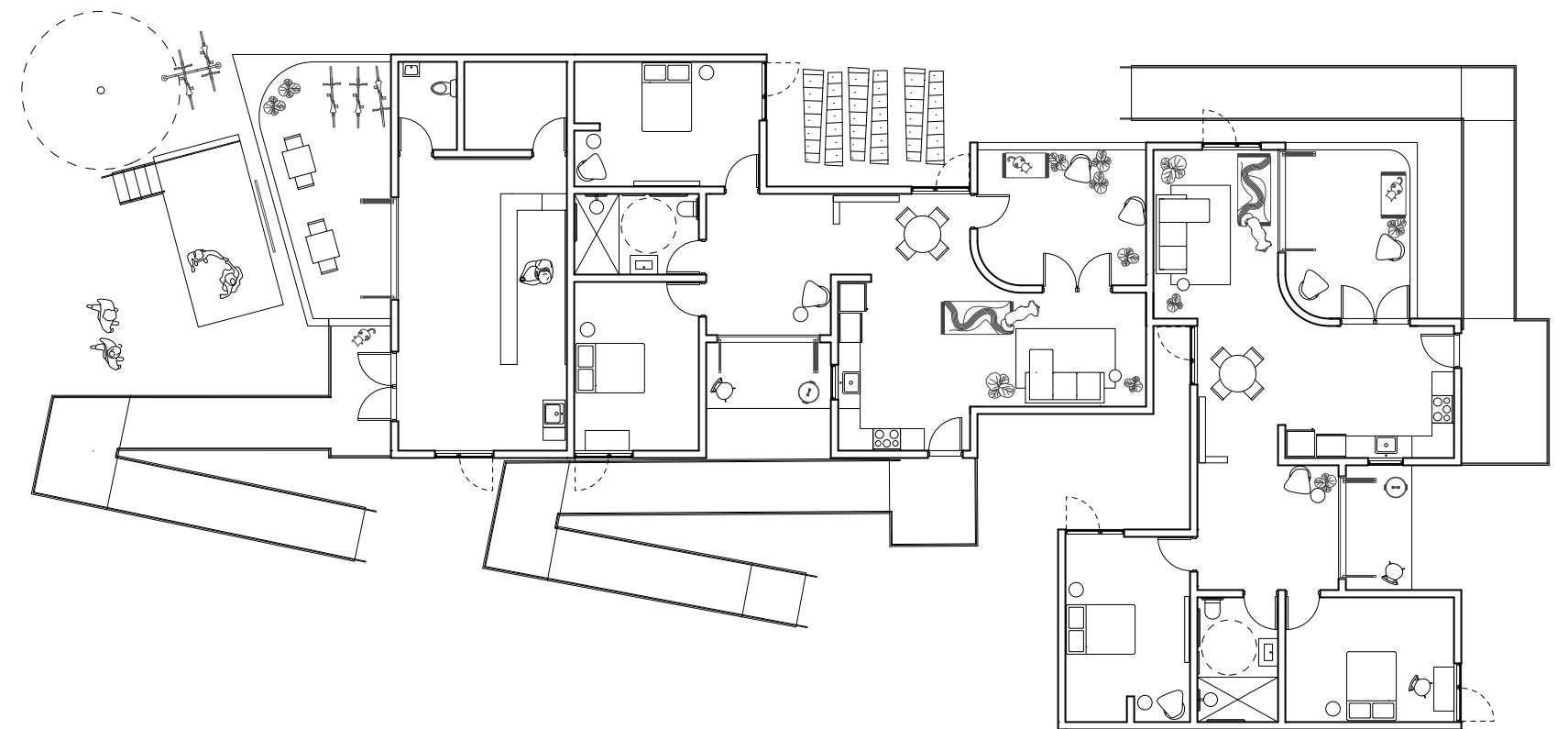
Building B Plan Level 1



Building D Plan Level 1



Building C Plan Level 1



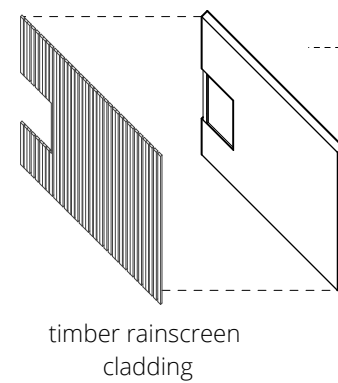
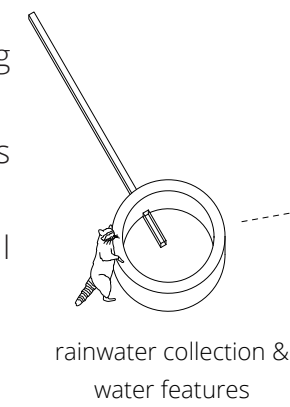
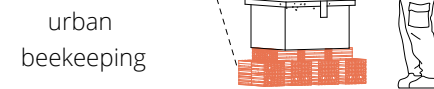
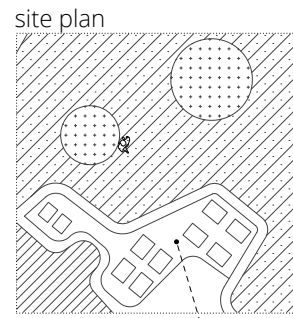
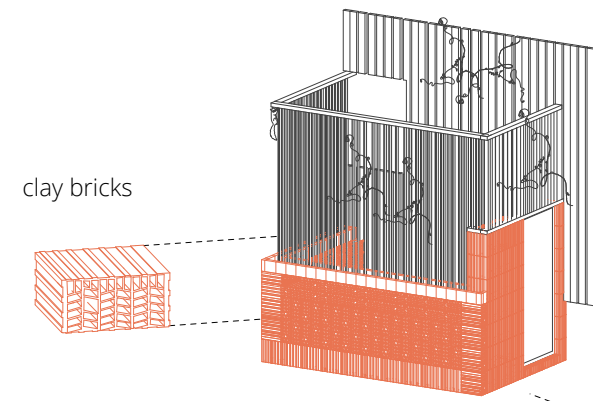
Building E Plan Level 1

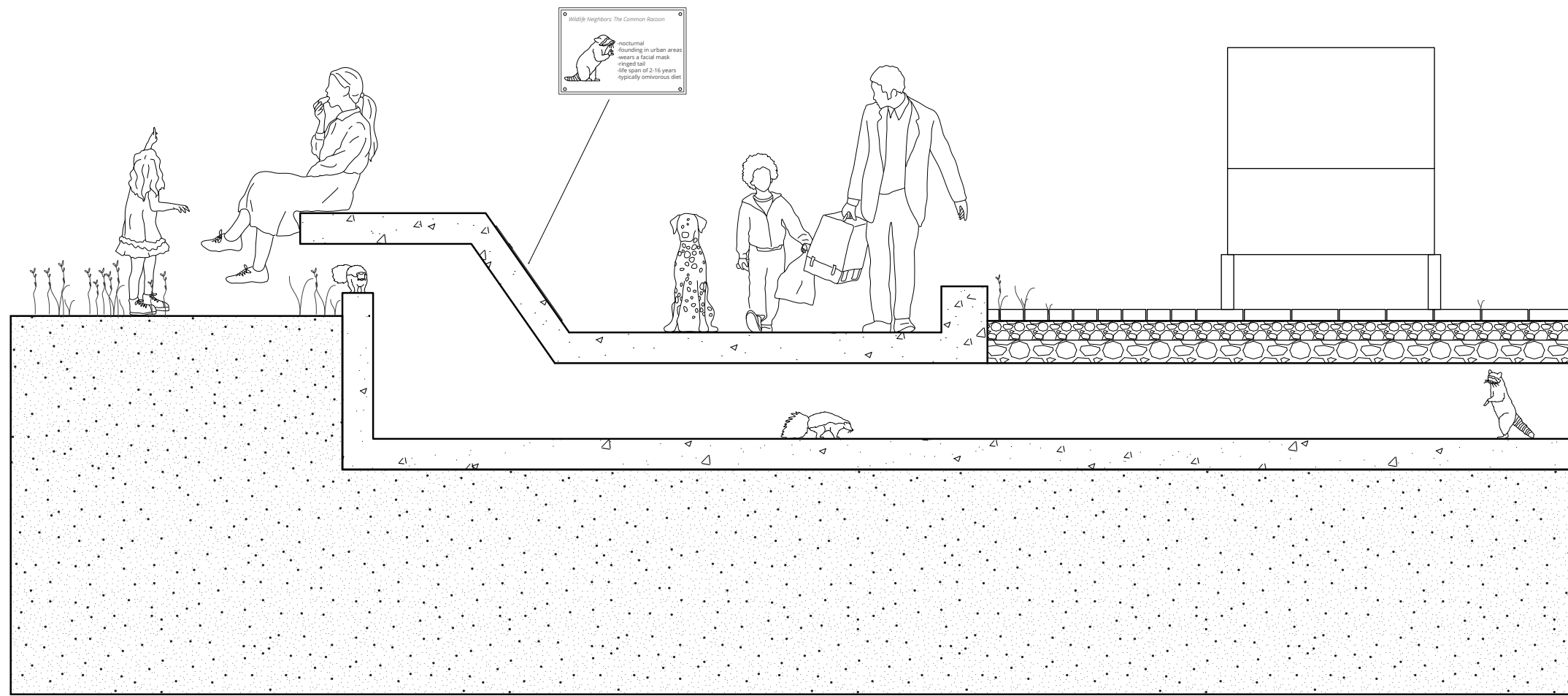
Landscape

The landscape design was an opportunity to create spaces that enhance life by connecting people to the natural environment through vegetation and water. The orange grove trees become the threshold between East Cesar Chavez street and the local bakery located on the site. Creating neighborhood spaces with urban seating, water features, and covered terraces allows them to become the connected spaces that extend to the city life.

The water features placed throughout the site are elements that are used to collect rain water and also become an opportunity for play and attracting non-human life. Further, the scale and placement of the water features allow for people to have a sense of community and a sense of personal responsibility for site features.

Shared and individual plant, herb, and food gardens are designed as collective spaces that sustain neighborhood life. The scale and placement of the gardens are placed strategically throughout the site to promote shared urban spaces that intersect private and public life.



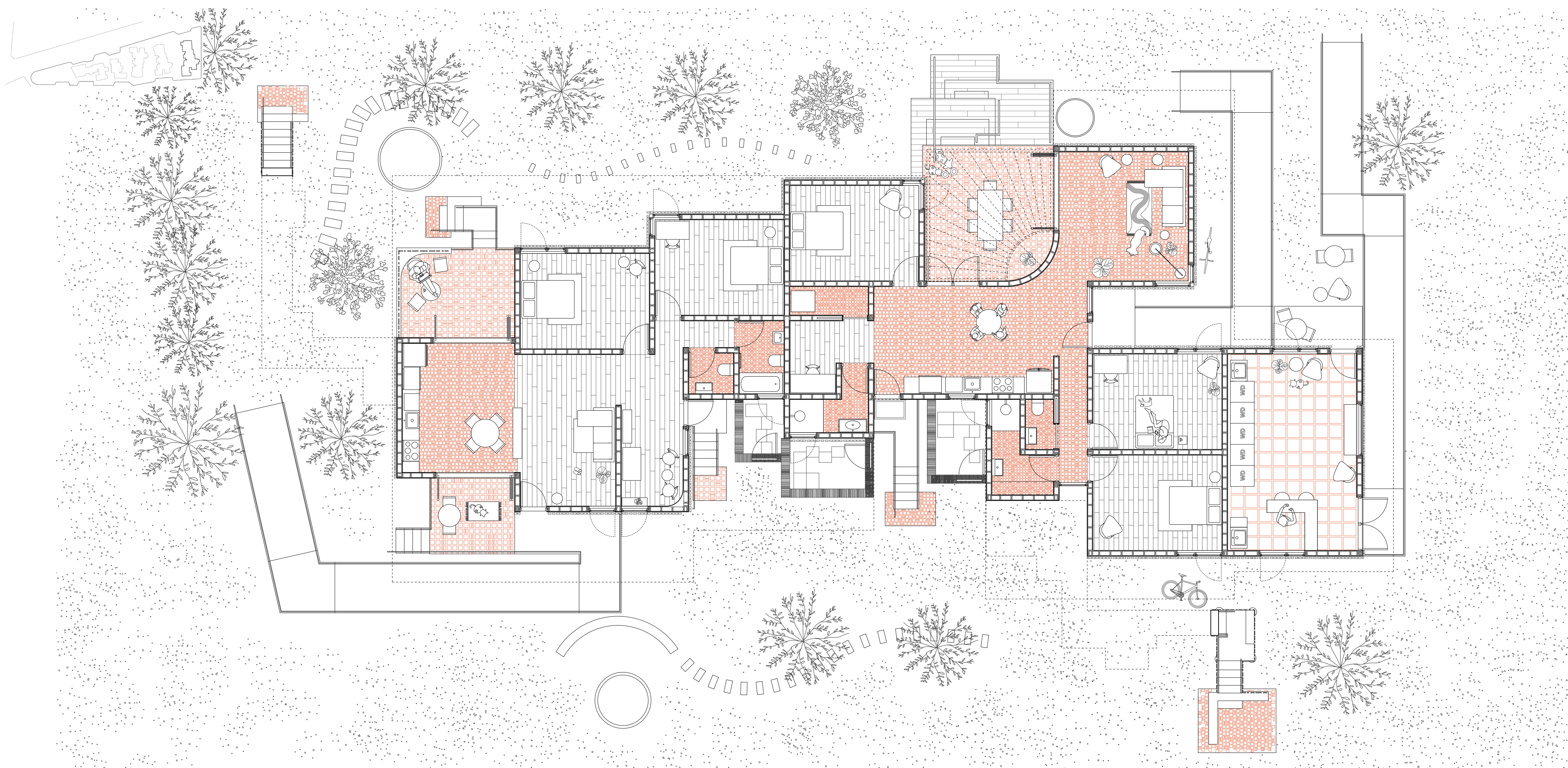


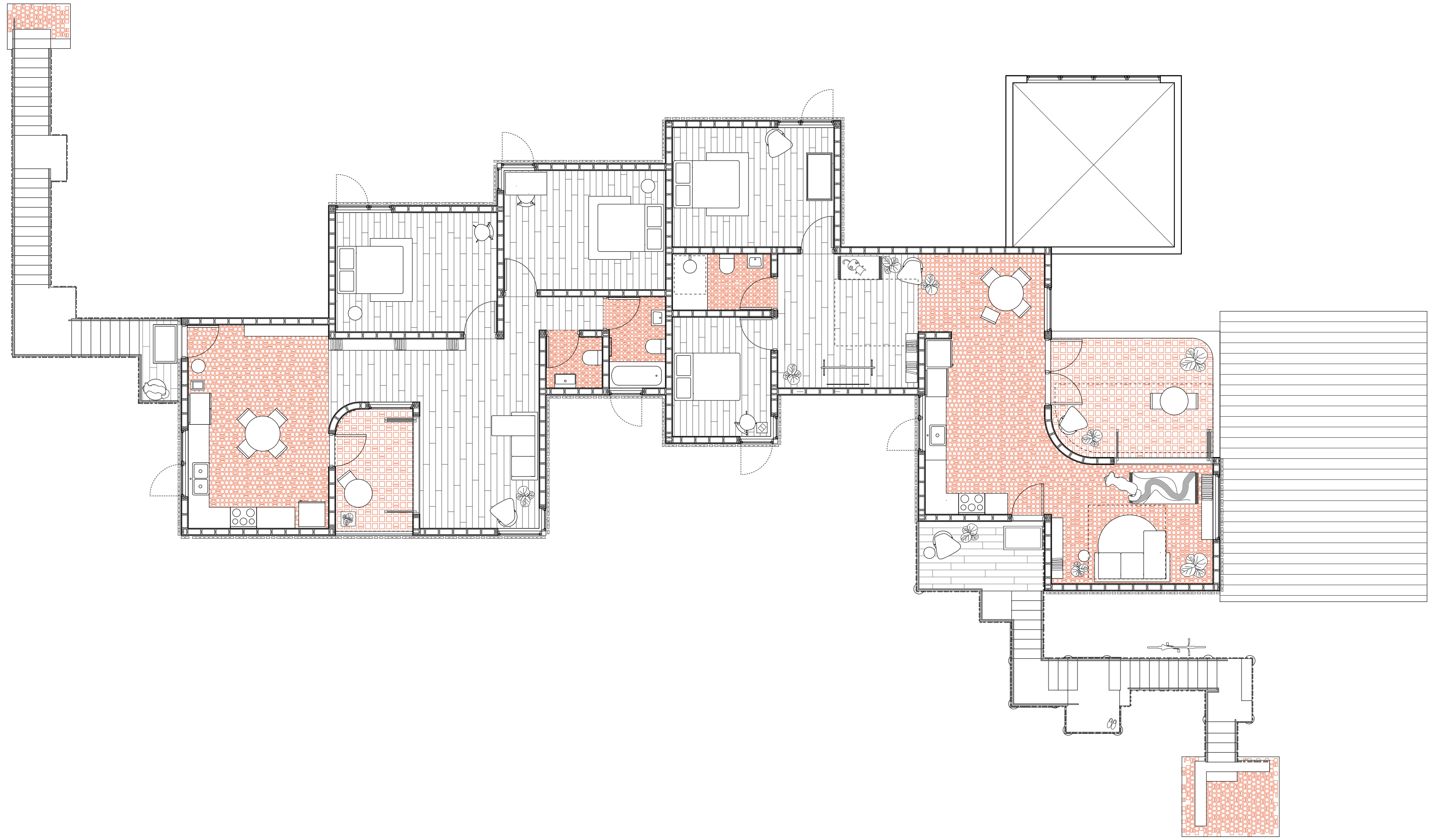
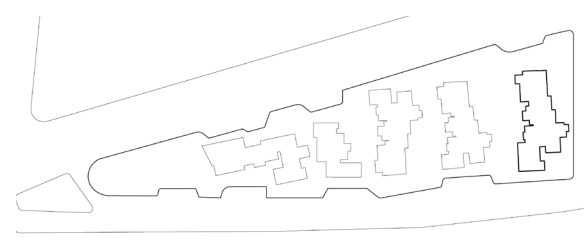
In response to the heat island effect exacerbated by the abundance of concrete and asphalt in the city, I suggest transforming the street by using pavers, with the vacant lot across from the site envisioned as an urban park used for shared neighborhood gardens, an urban bee farm, and spaces to interact with wildlife.

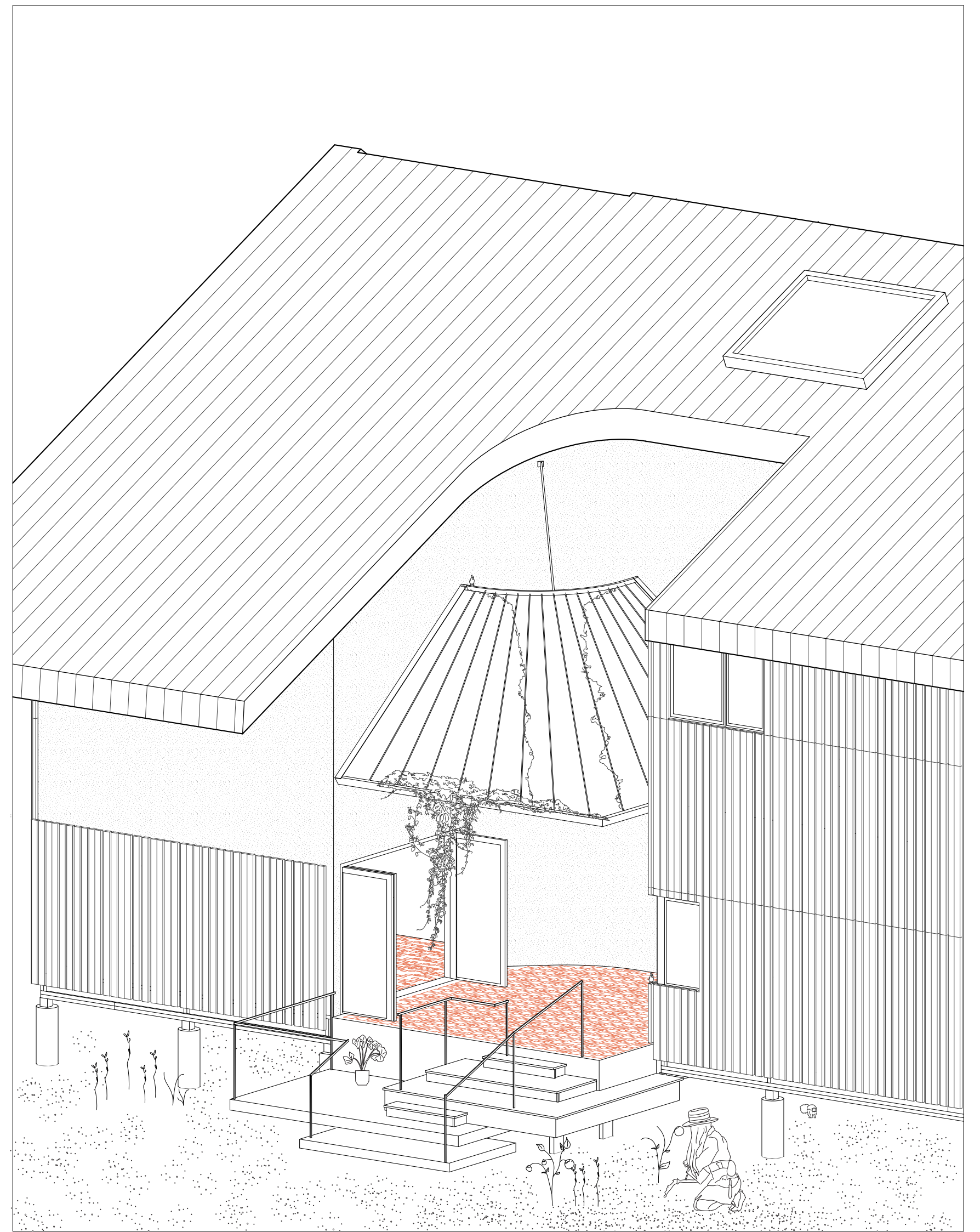
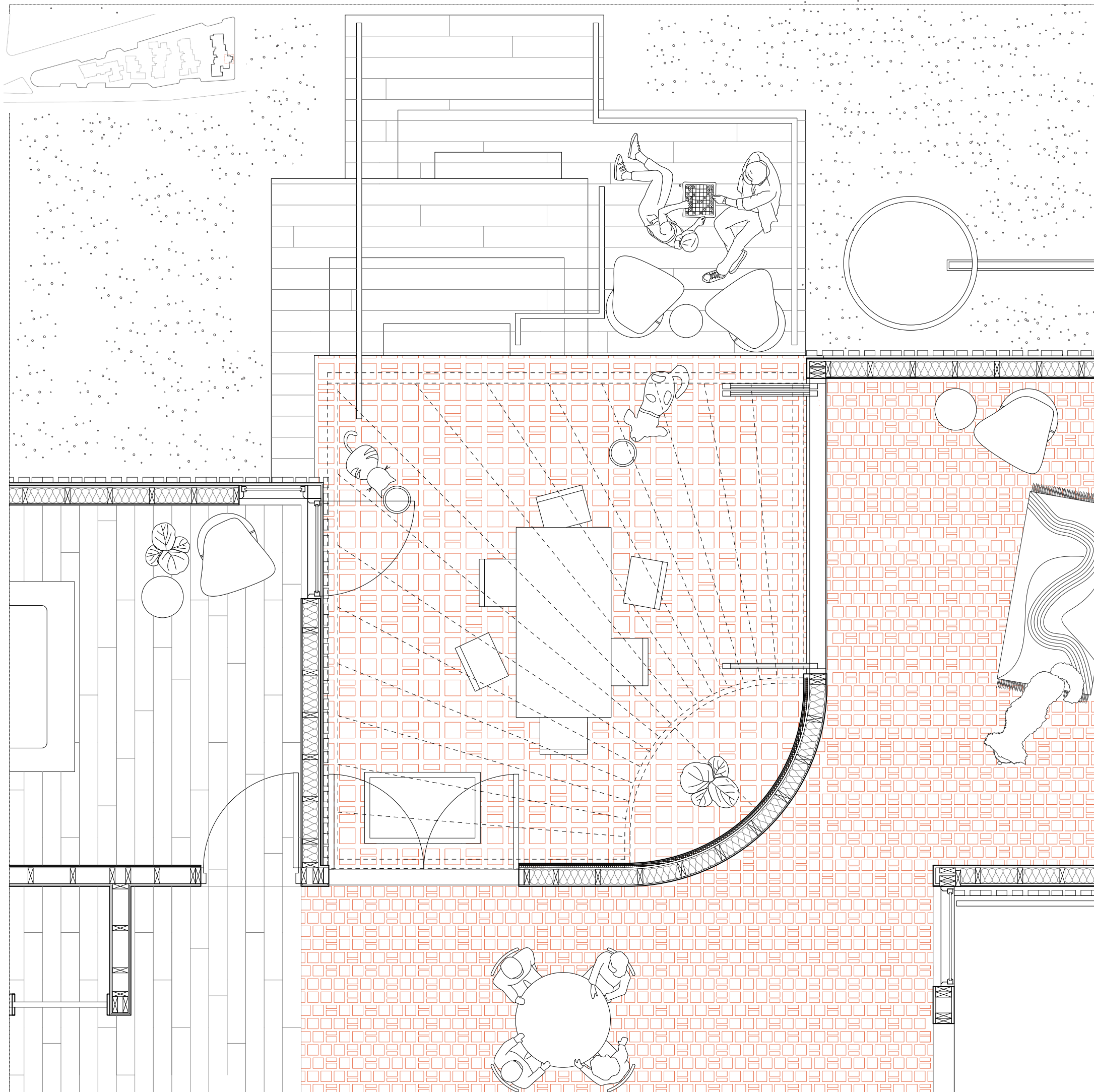
Neighbors

Given the proximity to the Colorado River and the urban setting of the site, various non-human wildlife species inhabit the area. Some of these non-human neighbors include foxes, possums, owls, skunks, raccoons, native birds to the area, and bats.

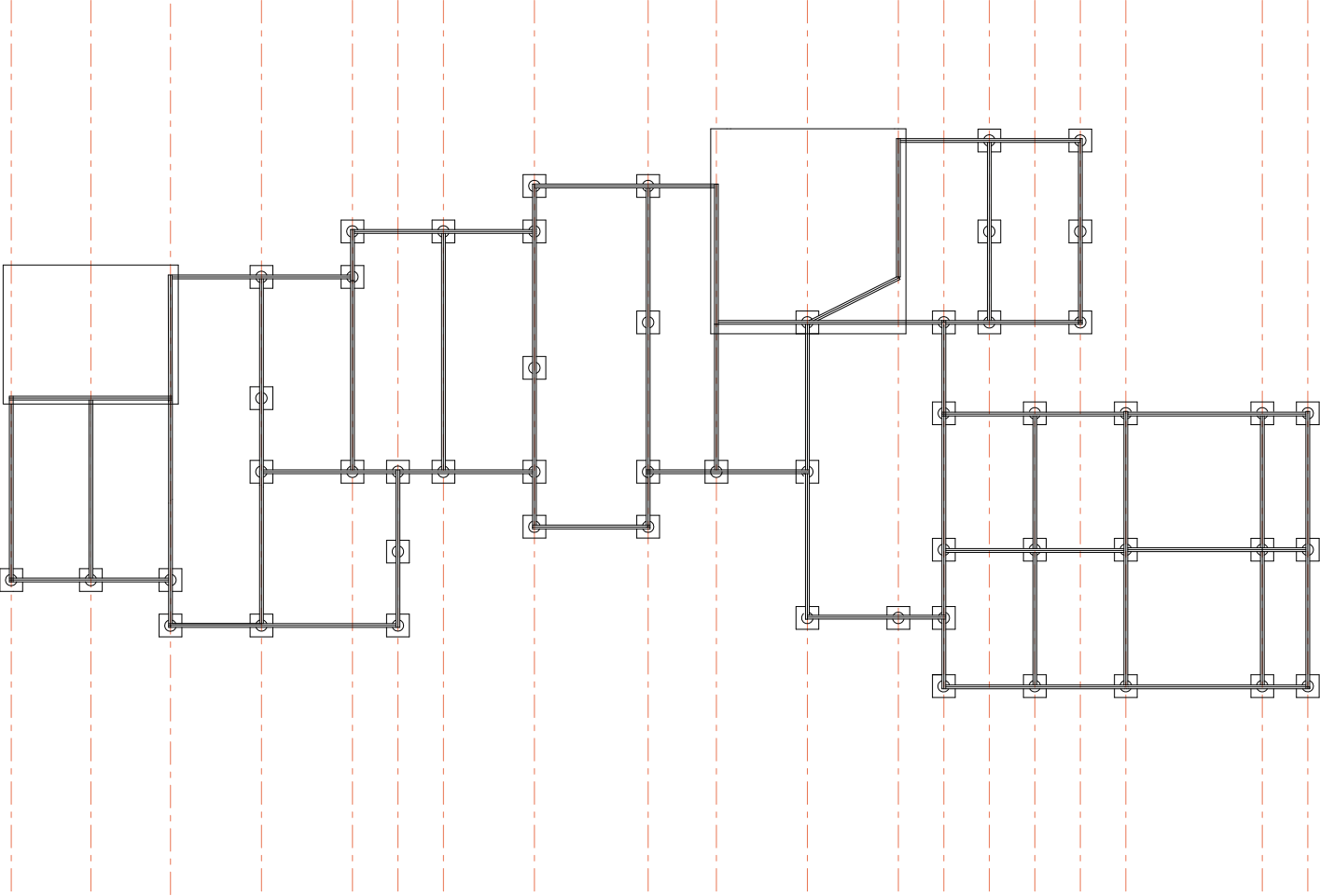
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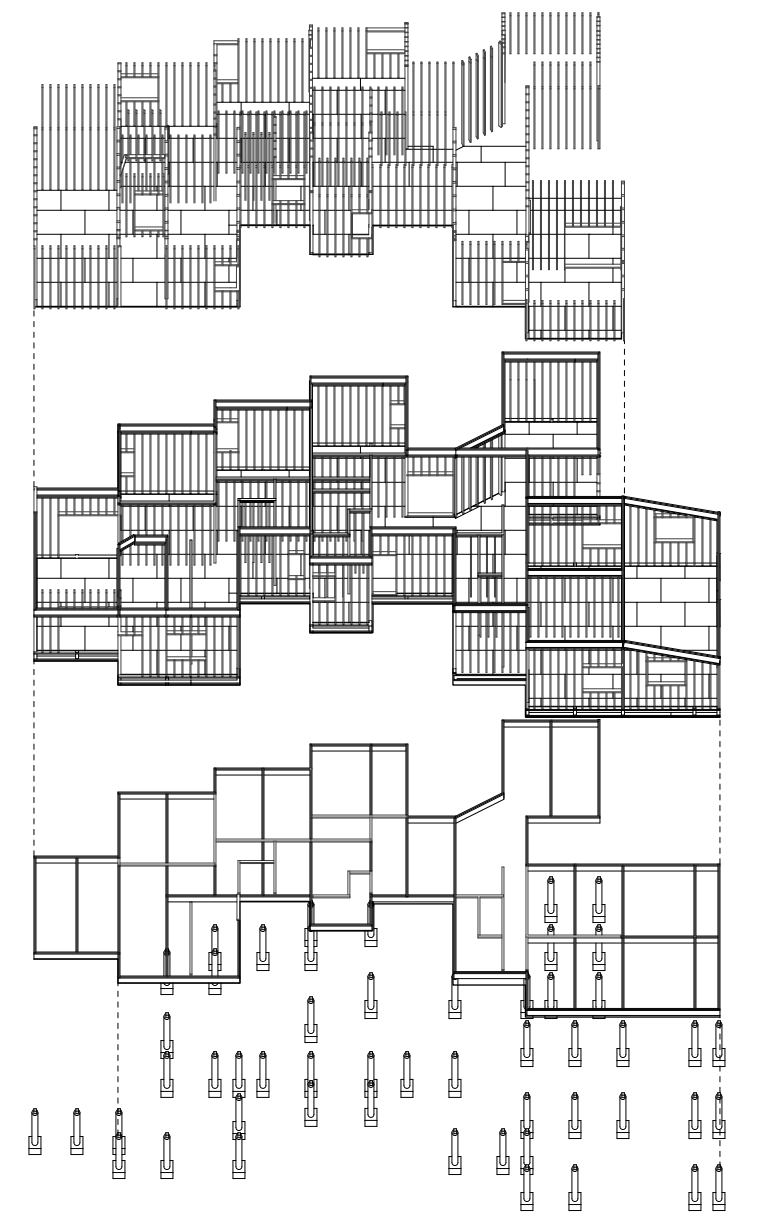
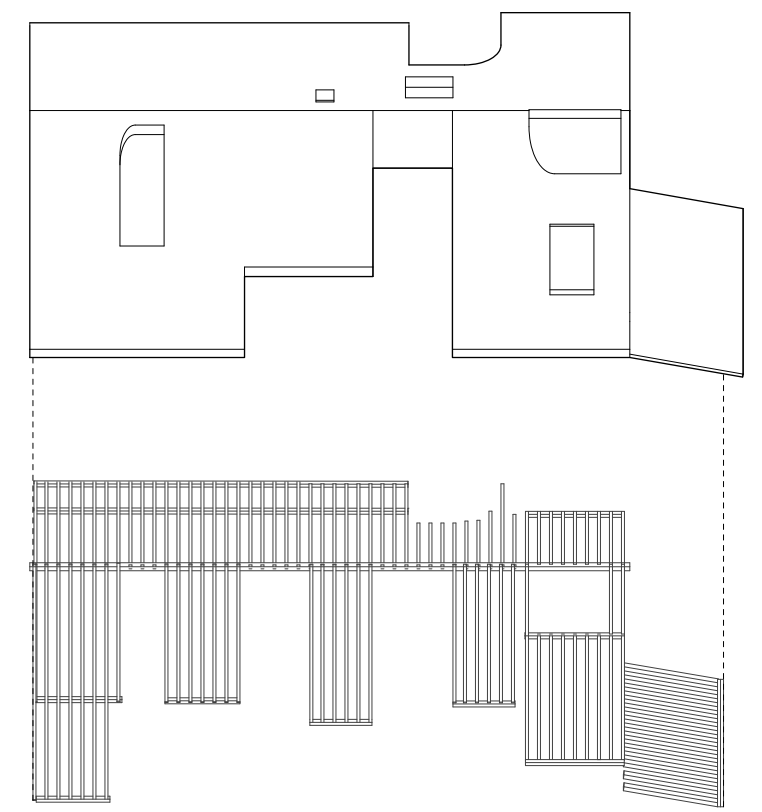
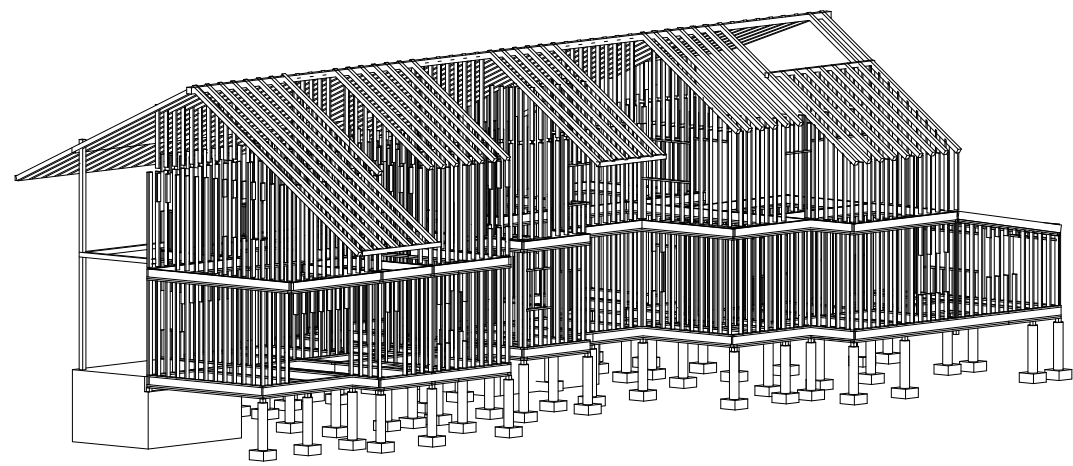
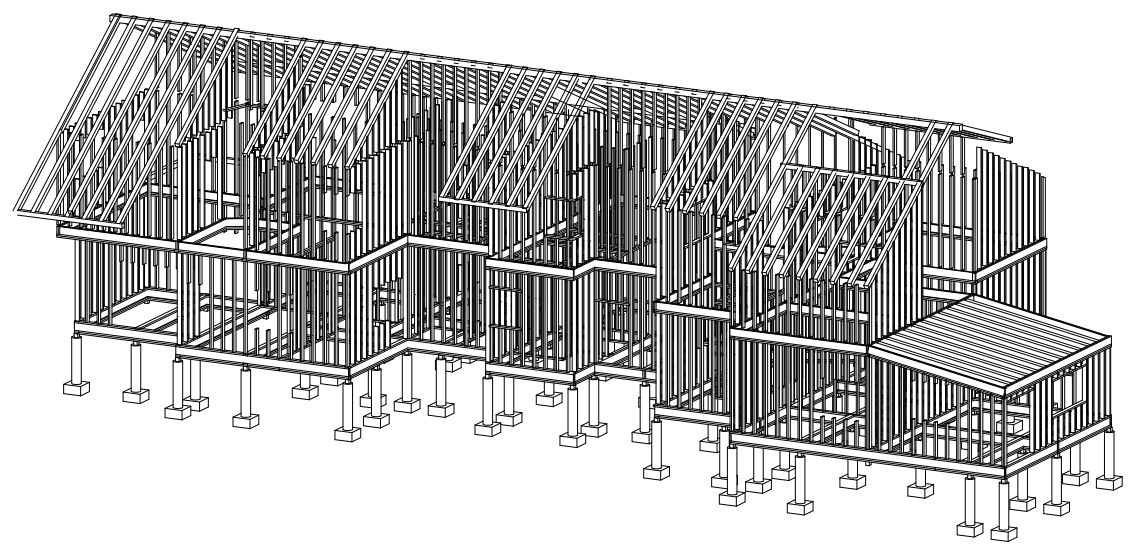


Structure & Materiality



The pier and beam construction is used to minimize disruption to the natural ecology, take advantage of climate and humidity benefits, and allow the land to remain continuous for natural wildlife.

The buildings are clad in an off white timber rain screen to provide enhanced thermal insulation and an improvement in energy efficiency with the climate conditions found in Austin, Texas. The light gray metal roof also becomes a strategy to reflect as much light as possible to help keep the second levels cool.



The material choices and structural strategies were determined with a consciousness about the nature of resources, such as using extracted resources vs non-extracted resources, to inform a site integration strategy that is considering and caring for the creeks, pecan trails, neighborhood farms, plant nurseries and other informal neighborhood ecosystems in the Govalle area. The concept is that all the buildings are supported by pier and beam foundations, with the exception of the concrete used for the terraces, front porches, and stair landings.

The structural material for the terraces are a precast box culvert that is also used as a water cistern for rainwater collection. Additionally, the floor materiality for the terraces and front porches are terracotta tiles, which become an integral part of the design throughout the project as a way to take advantage of the material qualities. The tiles create the possibility of keeping the spaces cooler throughout the hot months, creating more comfortable and enjoyable spaces throughout different times of the year. Further, the scale and design of the tiles begin to differentiate between the more public shared spaces, which use larger tiles. As the tiles bleed into the interior of the house, the tiles become much smaller in scale to accentuate the change of intimacy between the spaces. Overall, the terraces use passive cooling strategies to cool and ventilate the living spaces.

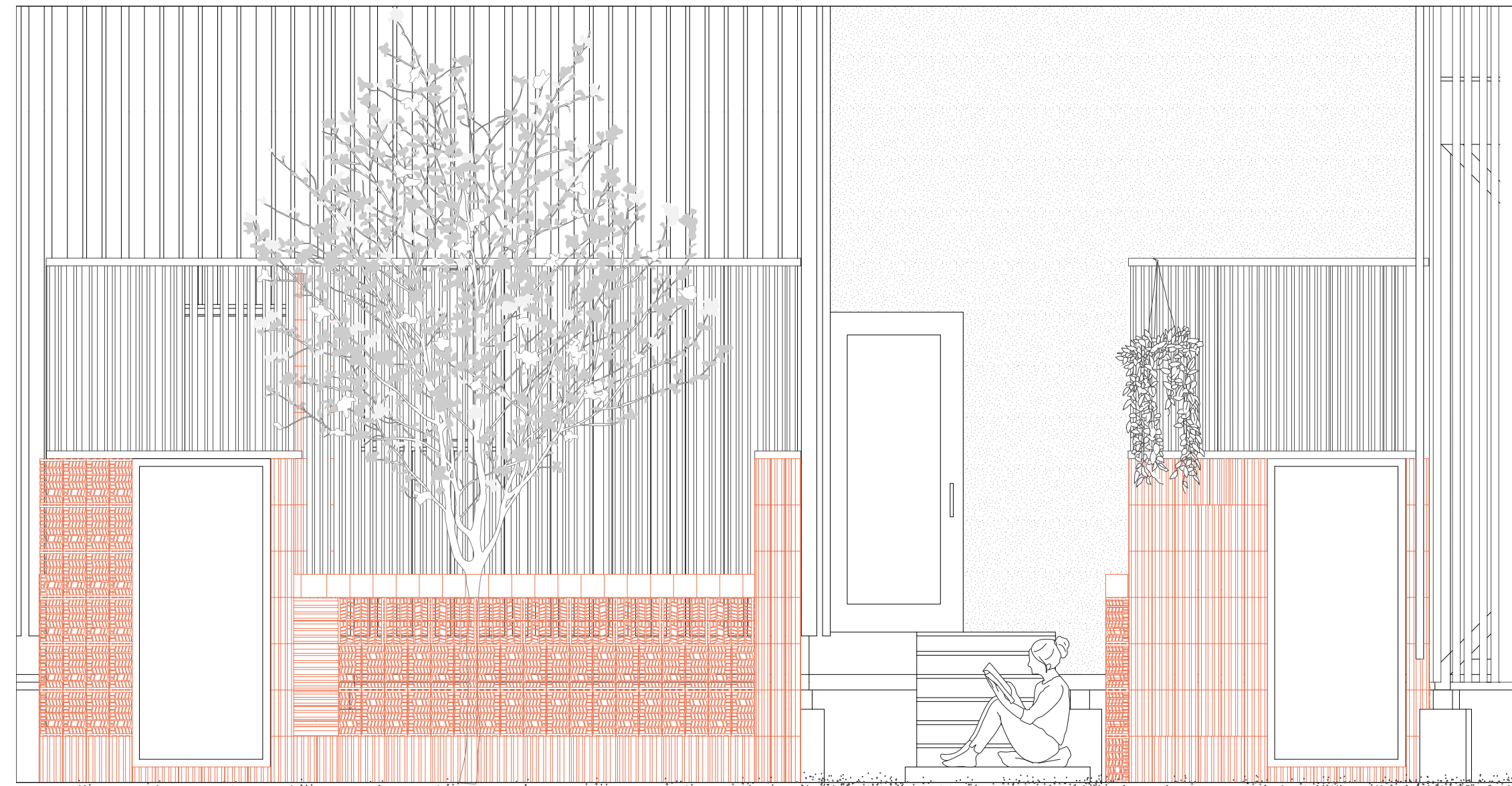
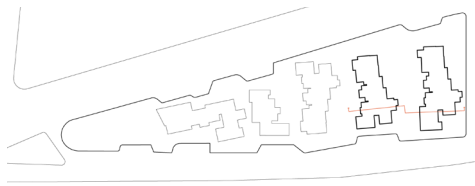


Image A: Case study can picafort TEd'arquitectes archdaily images
Images B-D: Material and textures google images

In Between Spaces

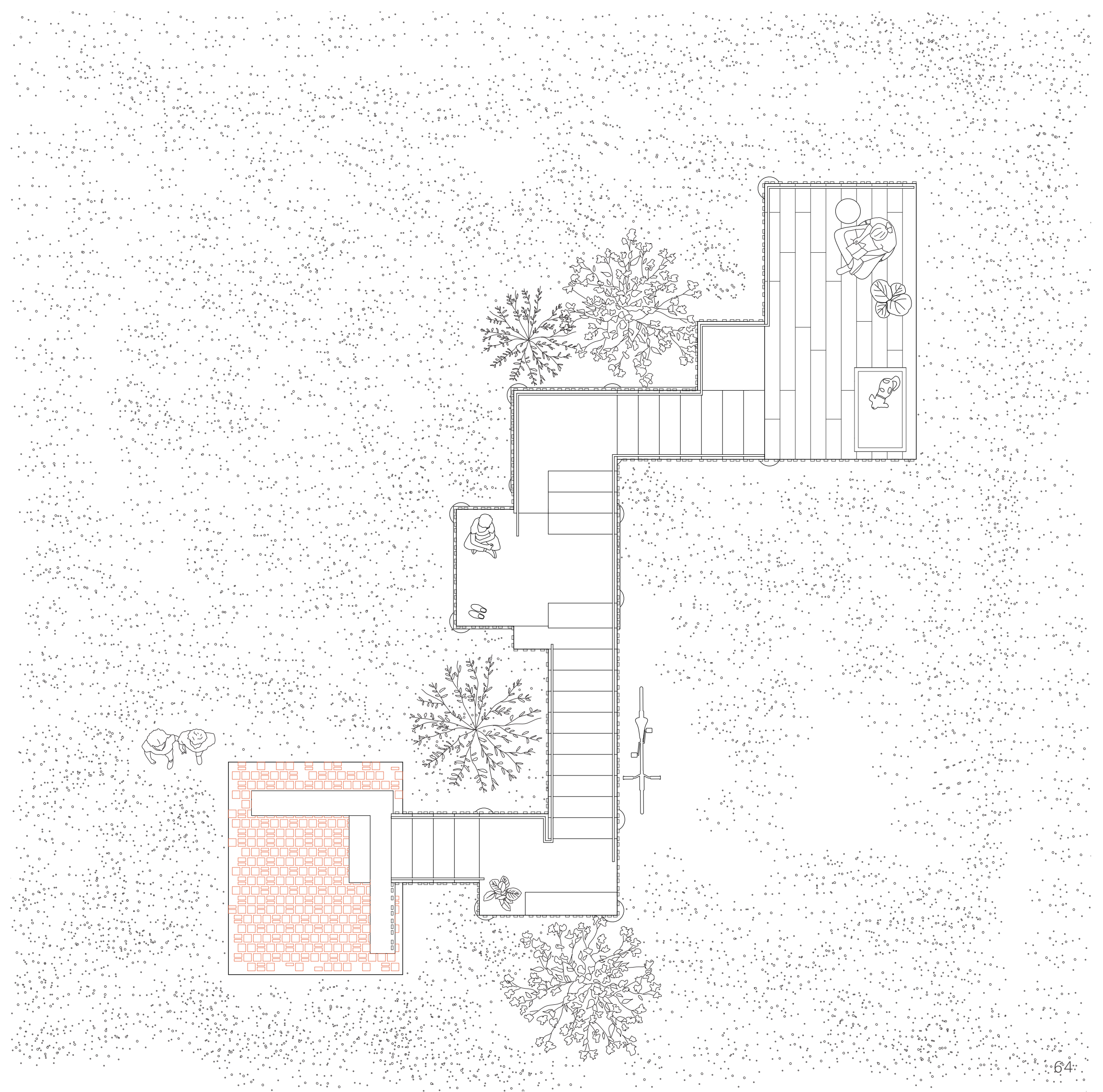
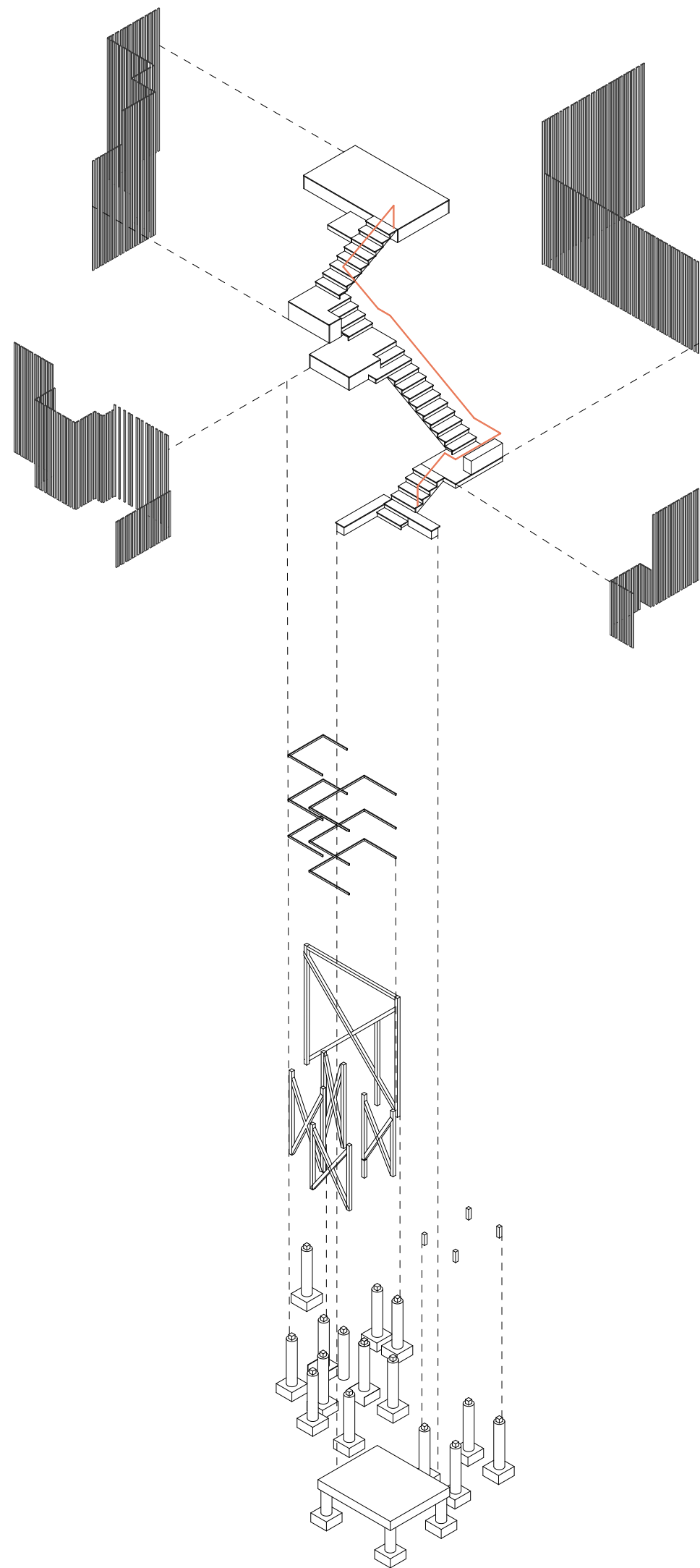
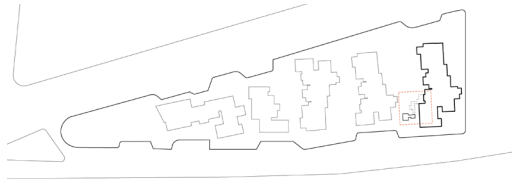


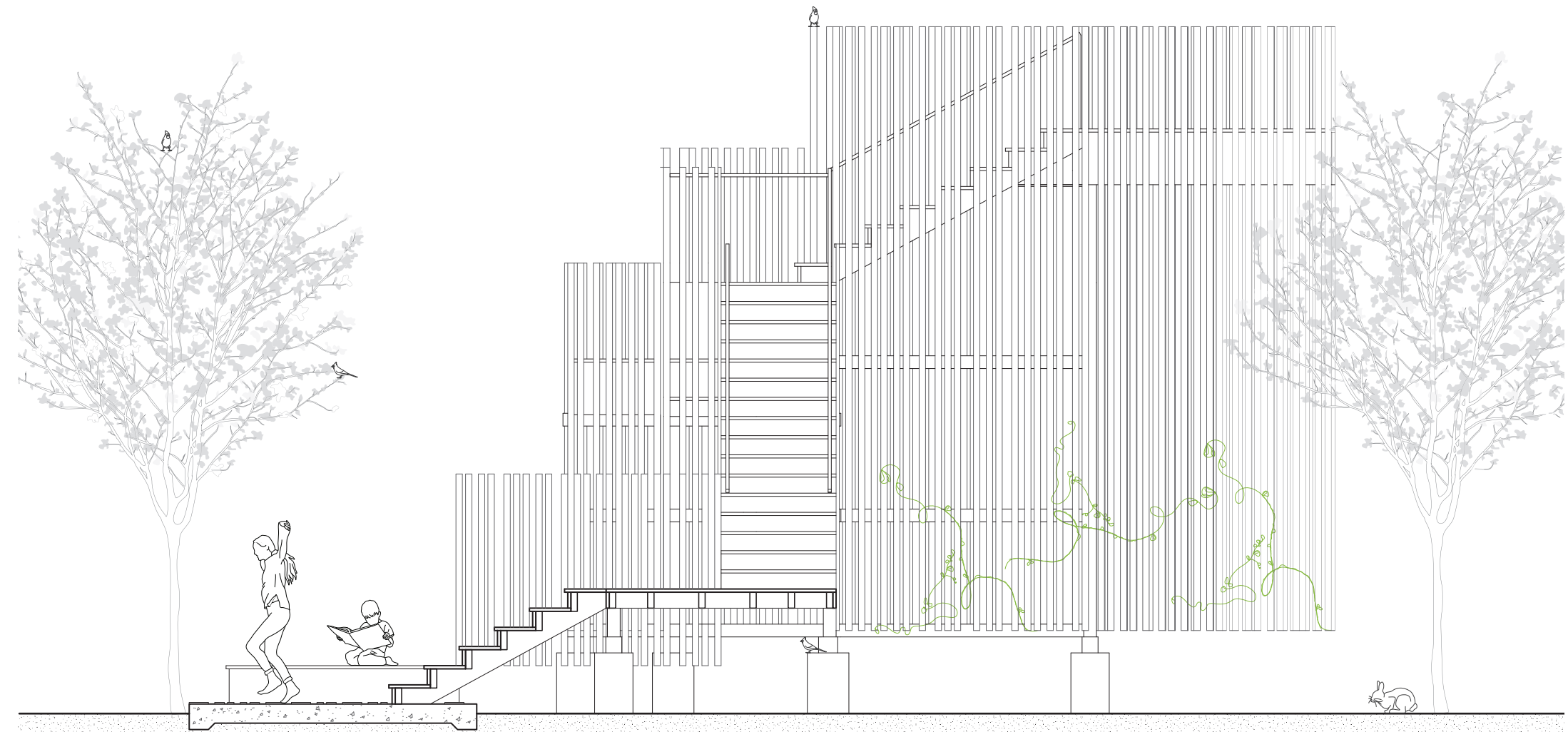
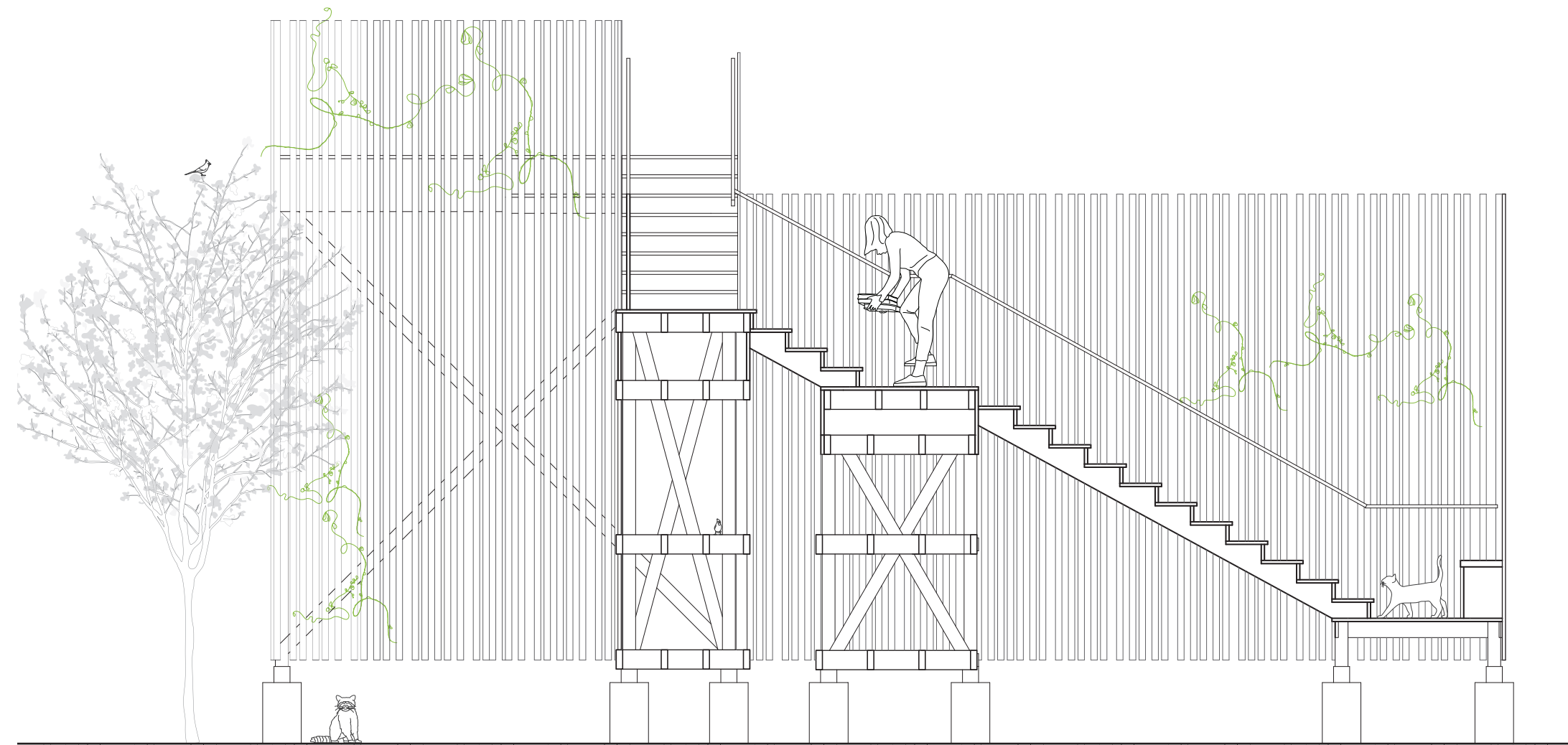
The in-between spaces, which can be thought of as spaces that are neither completely private or public, become the interconnecting thread between the house and the city. Designing with the five senses as a way of creating a place of comfort and joy began to give life and form to these spaces. A question that continued as the design strategies were tested was, how do we coexist with the natural environment?

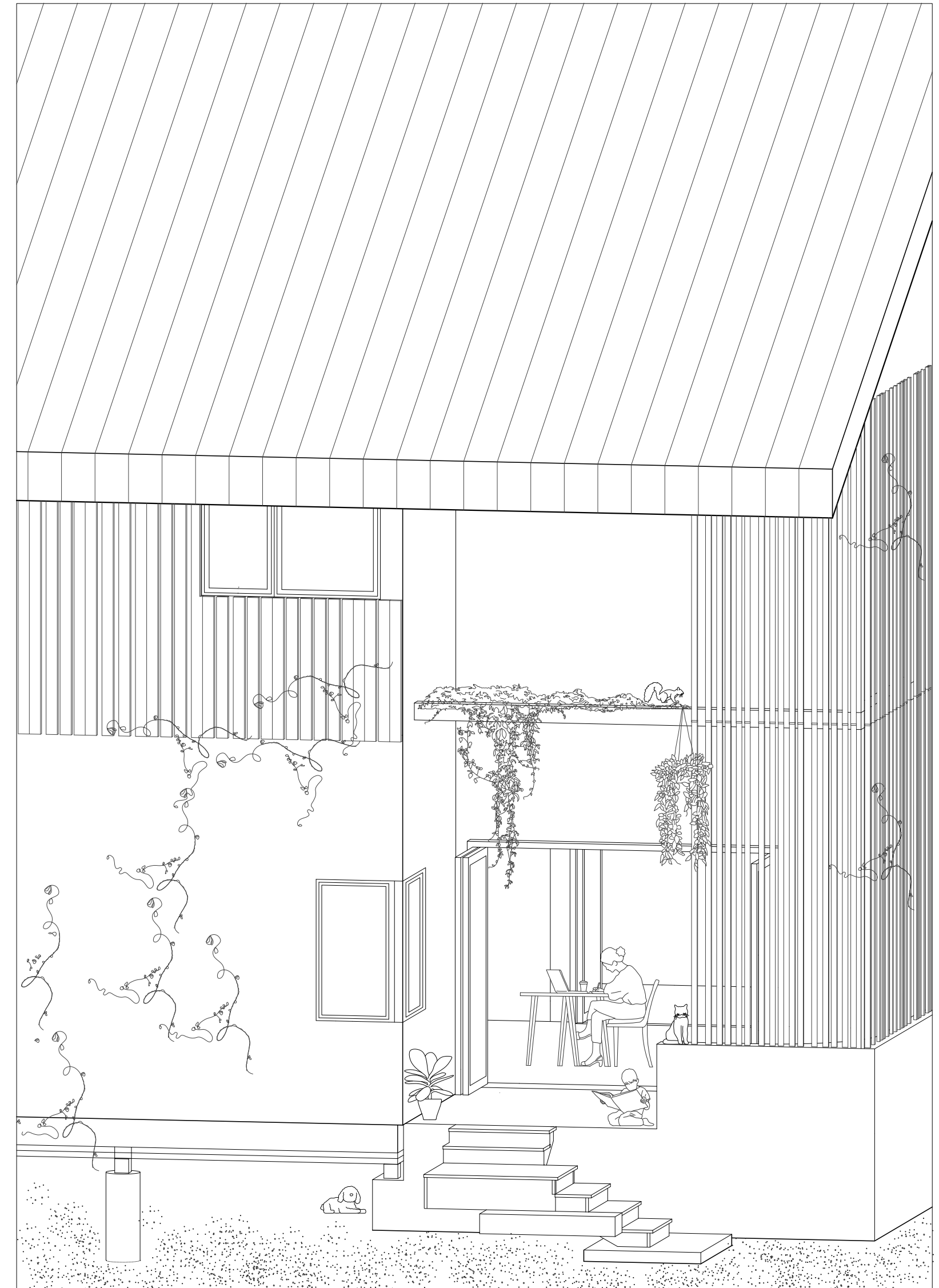
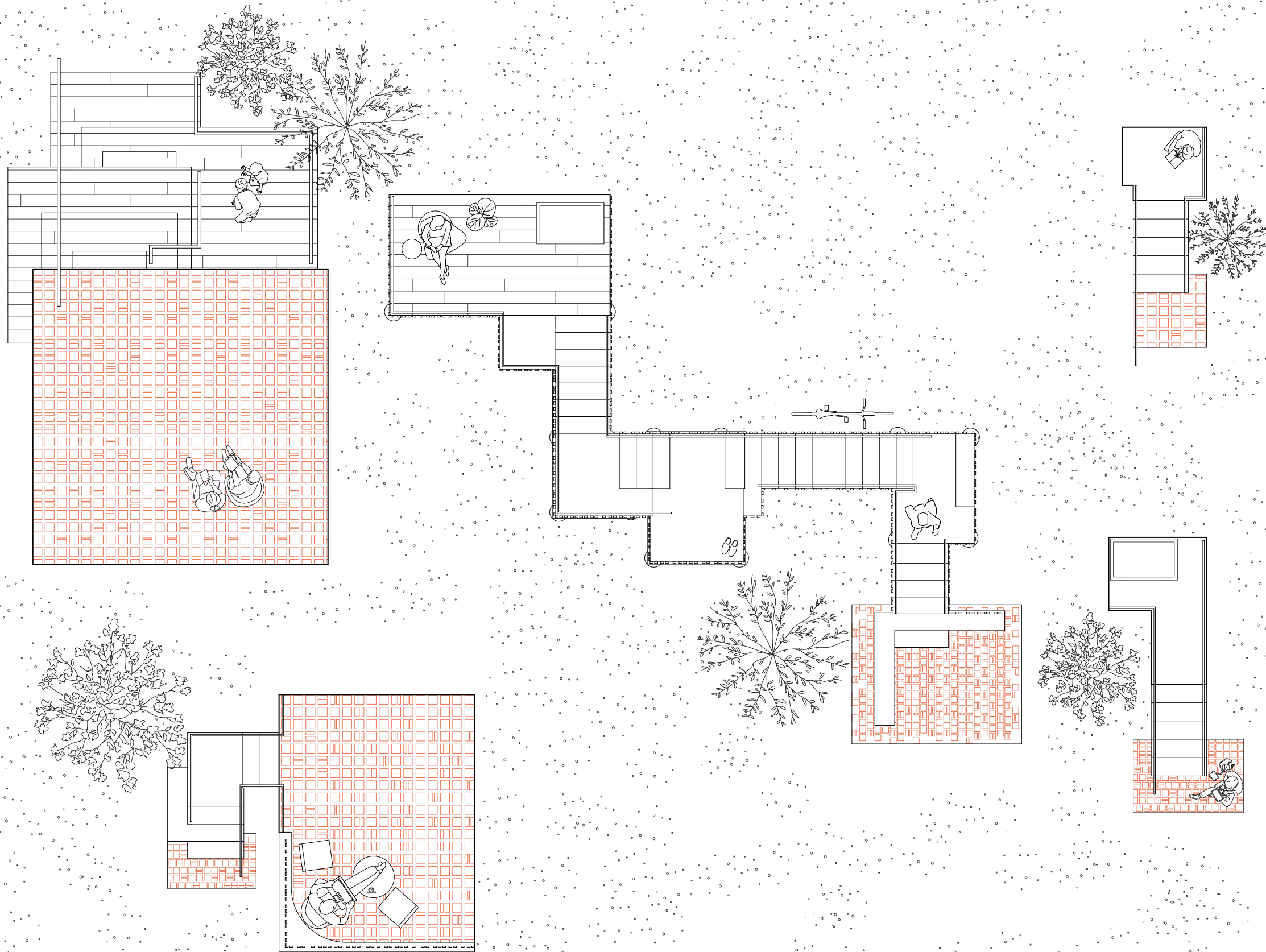


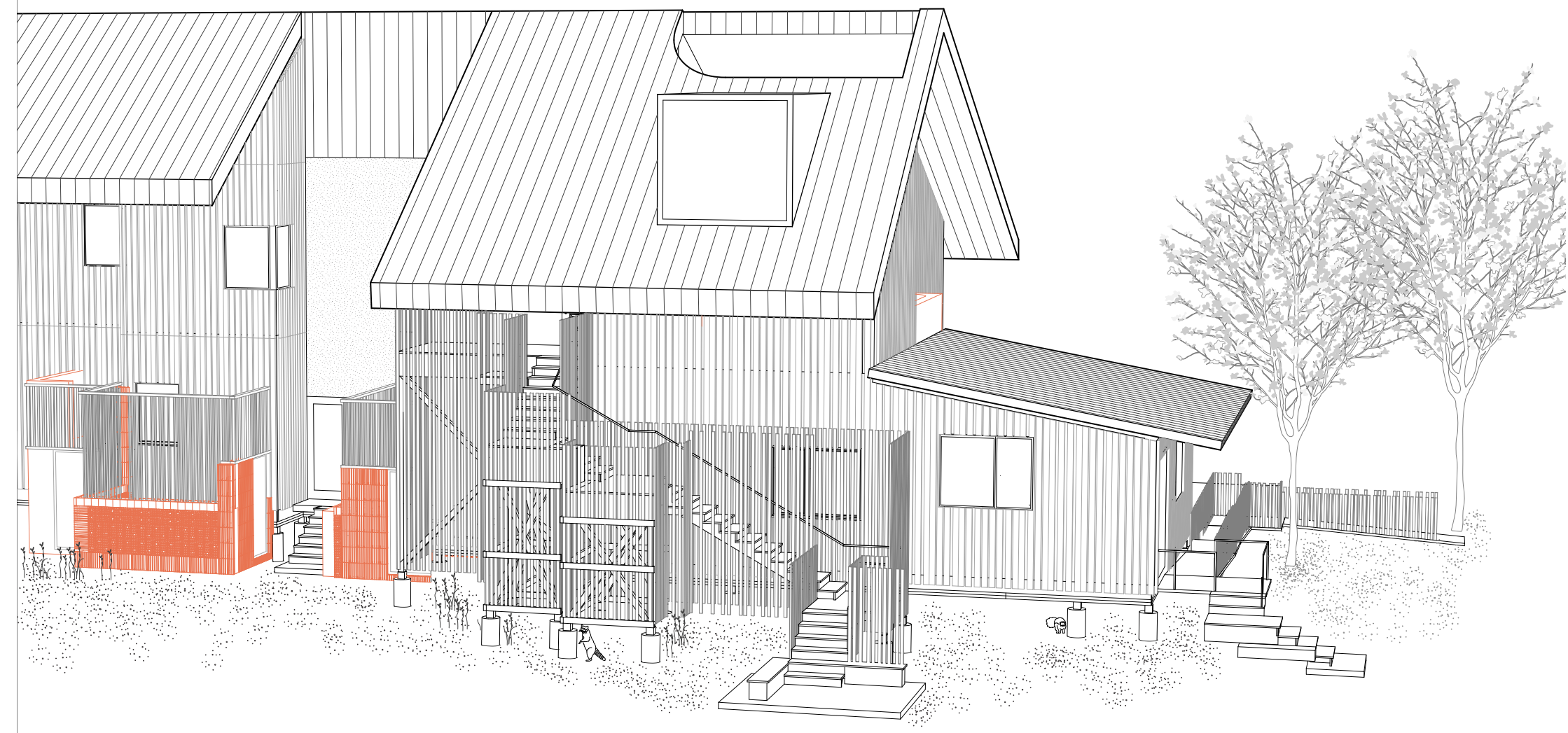
- 19. wooden deck
- 18. post installed anchors
- 17. pump
- 16. precast concrete cistern 39, 173 liters
- 15. overflow to discharge system
- 14. decking
- 13. 26 gauge metal
- 12. batt insulation
- 11. Z furring
- 10. timber rain screen
- 9. air and water baffle
- 8. sheathing
- 7. hardwood floor finish
- 6. decking
- 5. (2) 2 x 10 beam
- 4. 2x8 sill
- 3. steel imbed plate
- 2. sonotube pier
- 1. concrete footing





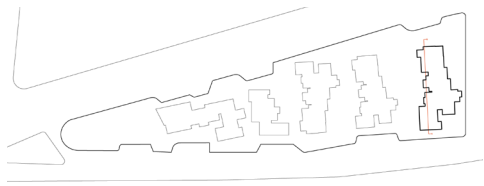






The design thinking for the stairs focused on creating opportunities for encounters and collectivity. Considering the stairs as thresholds between the house and the shared courtyard spaces resulted in various levels of public and shared spaces. Further, the structural and materiality strategies consider non-human life encounters as well.





The thesis question enabled me to test the formal and informal connections that architecture creates among people, the natural environment, and wildlife. Conceptualizing the neighborhood as a container filled with various activities, conditions, constraints, opportunities, and events, I selected elements to explore further, while questioning and actively engaging with those components.

The ambition of this project is to continue an ongoing conversation about the ideas of collective living while considering the ecological thresholds, the conscious care of material choices, land-related concerns, and the importance of shared public spaces in diverse urban settings. As architects, designers, and researchers, it is our responsibility to challenge prevailing architectural practices and mindsets, prioritizing environmental stewardship while creating spaces that inspire beauty, joy, and comfort for people.

