

P O R T F O L I O

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2019-2020 Selected	ZHANG, TING	MSAUD	ting.zhang @columbia. edu

CATALOG . . .

URBAN DESIGN STUDIO

01 SEEDING THE MACHAMBA

02 DISPERSING WELLNESS

03 WASTE FRONT

DATA ANALYSIS

04 INFLUENZA ACTIVITIES AND
NEIGHBORHOOD CHARACTERISTIC

05 THE STARBUCKS EFFECT

06 BIKE CAMPAIGN IN NYC

RESEARCH

07 EXTRACTIVE URBANISM

08 PRESERVE

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_TITLE

Begins the story...

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_PROLOGUE

I like stories, those which tell how people meet each other and form their relationships, and I believe that the physical environment plays the essential role as the stage for those romantic plots. Coincidence or pre-ordination is driven by the interconnection of several daily routines, and the points of those intersections are urban public spaces which accommodates people's everyday life.

Designing space is designing people's lives. I have always been thinking that architects are acting like entrepreneurs, trying to

find the balance of interests from different groups and seek an optimal solution: we organize urban space, provide possibilities for people to build connections with other objects, and the process of design resembles a social practice, which puts every aspect of the society into consideration.

At the present technological society, people are drifting apart from each other, living with cell phones in the virtual world. My works in this portfolio are mostly based on human experience in attempt to recall citizens' collective memory.

01

SEEDING THE MACHAMBA

*Urban Design Studio III
Spring 2020*

Site: Beira, Mozambique

*Instructor: Kate Orff, Geeta Mehta, Thaddeus Pawlowski,
Lee Altman, Dilip Da Cunha, Julia Watson, Adriana Chavez*

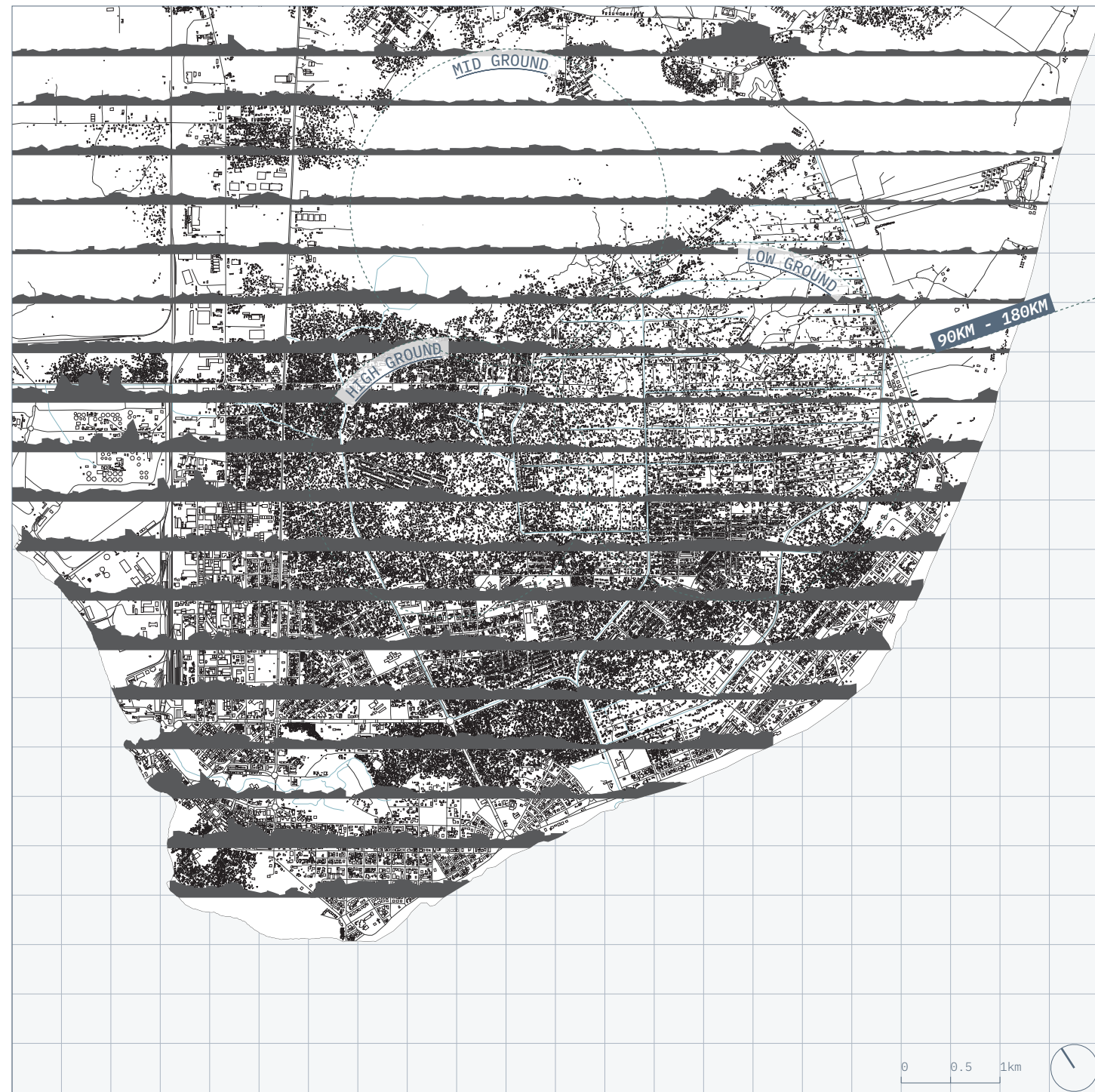
*Team: Joy You-Chiao Wu, Jaime Palacios Anaya,
Ashwin Nambiar, Xinyue Liu*

Role in Team: Research, Conceptual Design, Modeling, Renders

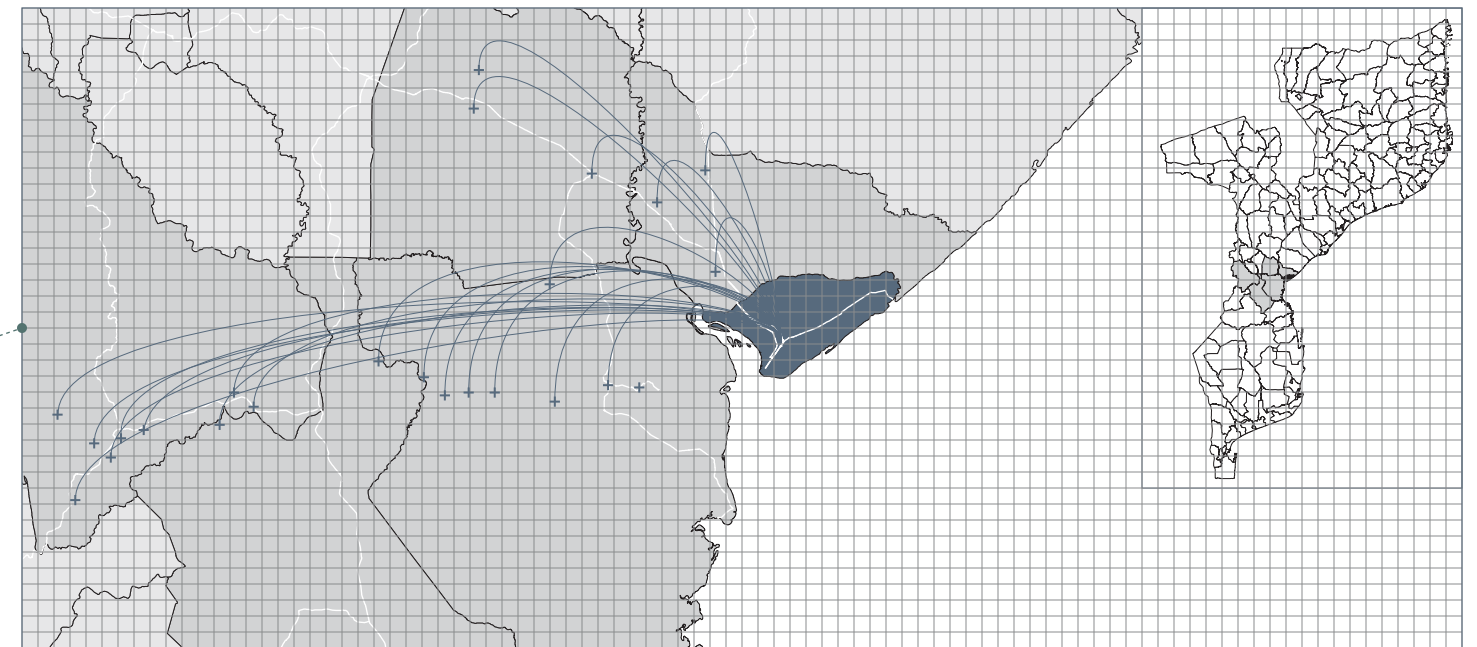
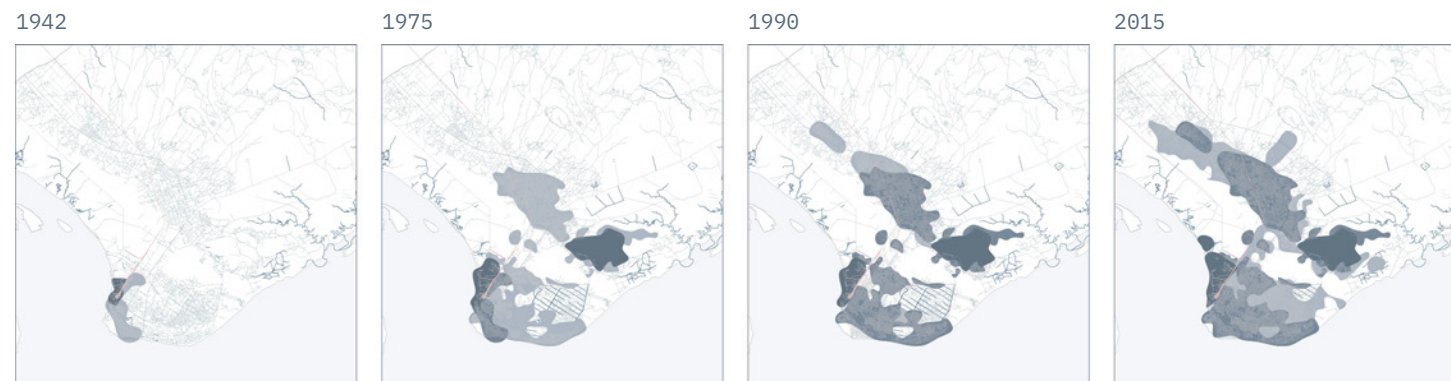


Machambas in Beira, Mozambique

The city of Beira has an extensive and integrated system of traditional agriculture that is under threat. Our project conceives of this system as more than just agriculture - it is a productive and preventative flood infrastructure. We envision that this agricultural system could coordinate communities, organize the city, and be the key to recovery and ongoing resilience. Our goals including Consolidate and organize cooperatives at a city scale, Protect social and ecological capital, Empower women in agriculture, Diversify income and create job opportunities, Integrate adaptive, nature-based infrastructure.

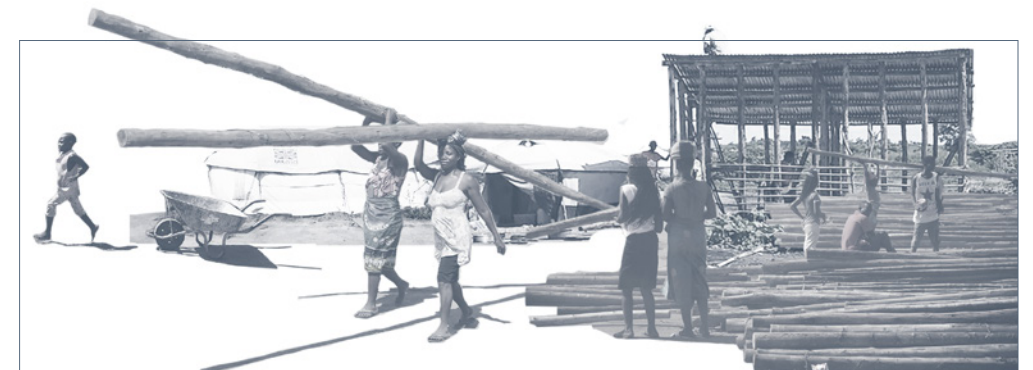


Urban Morphology



Of the 71 sites assessed, 82% are located in Sofala and Manica provinces which represent 85% of the displaced population.

Currently, the resettlement plan defines "risk zones" and resettles the people to further inland, it disregards people's livelihoods and that's why people keep moving back to the settlements and stay in the front of the threats of flooding.



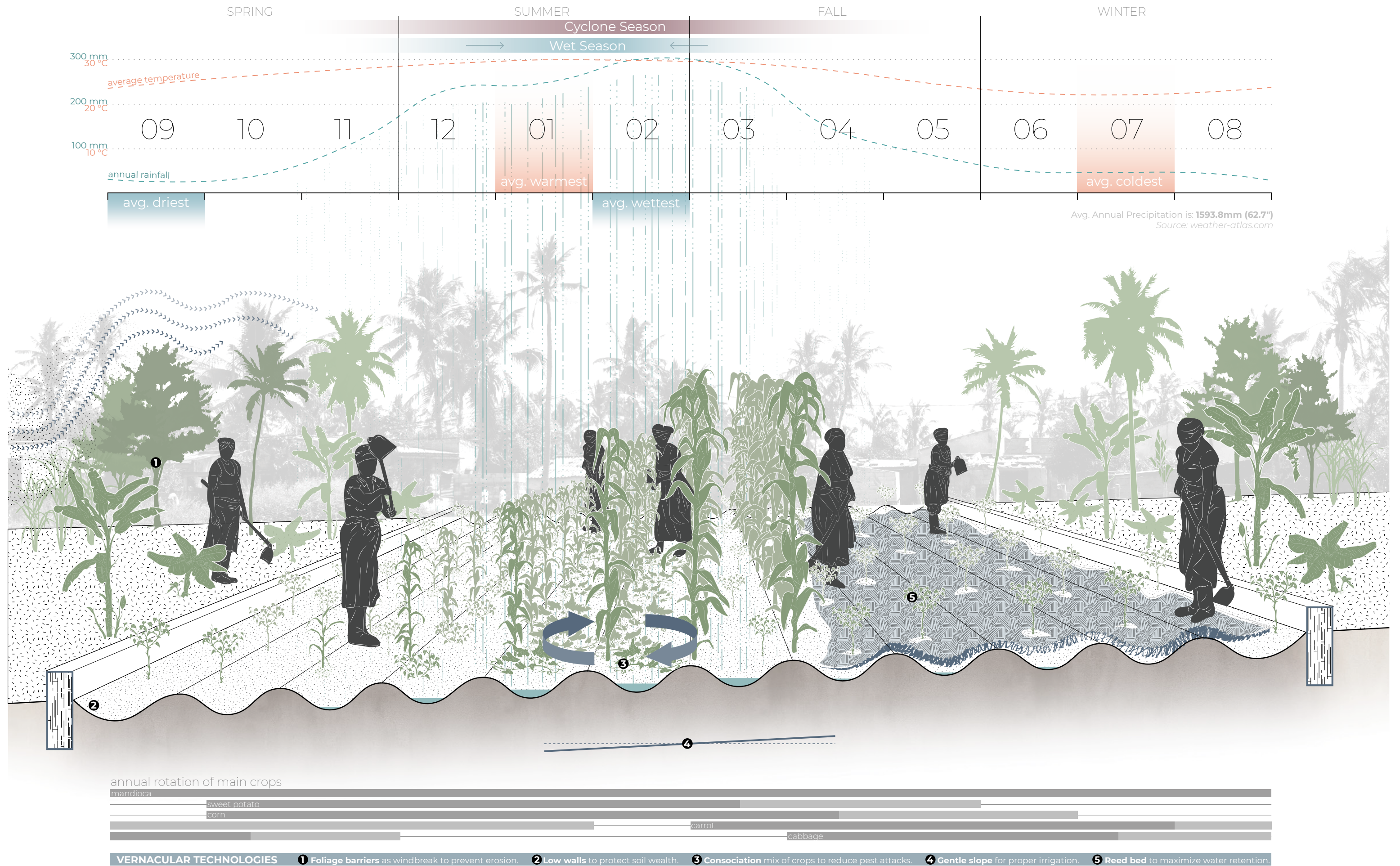
"Flooding" is a consequence of unplanned sprawl into low-lying agricultural land. The current resettlement plan disregards people's livelihoods and defines "risk zones" in the city, instead of recognizing them as assets for the city. Need of elevational programming for future cyclones and urban growth.

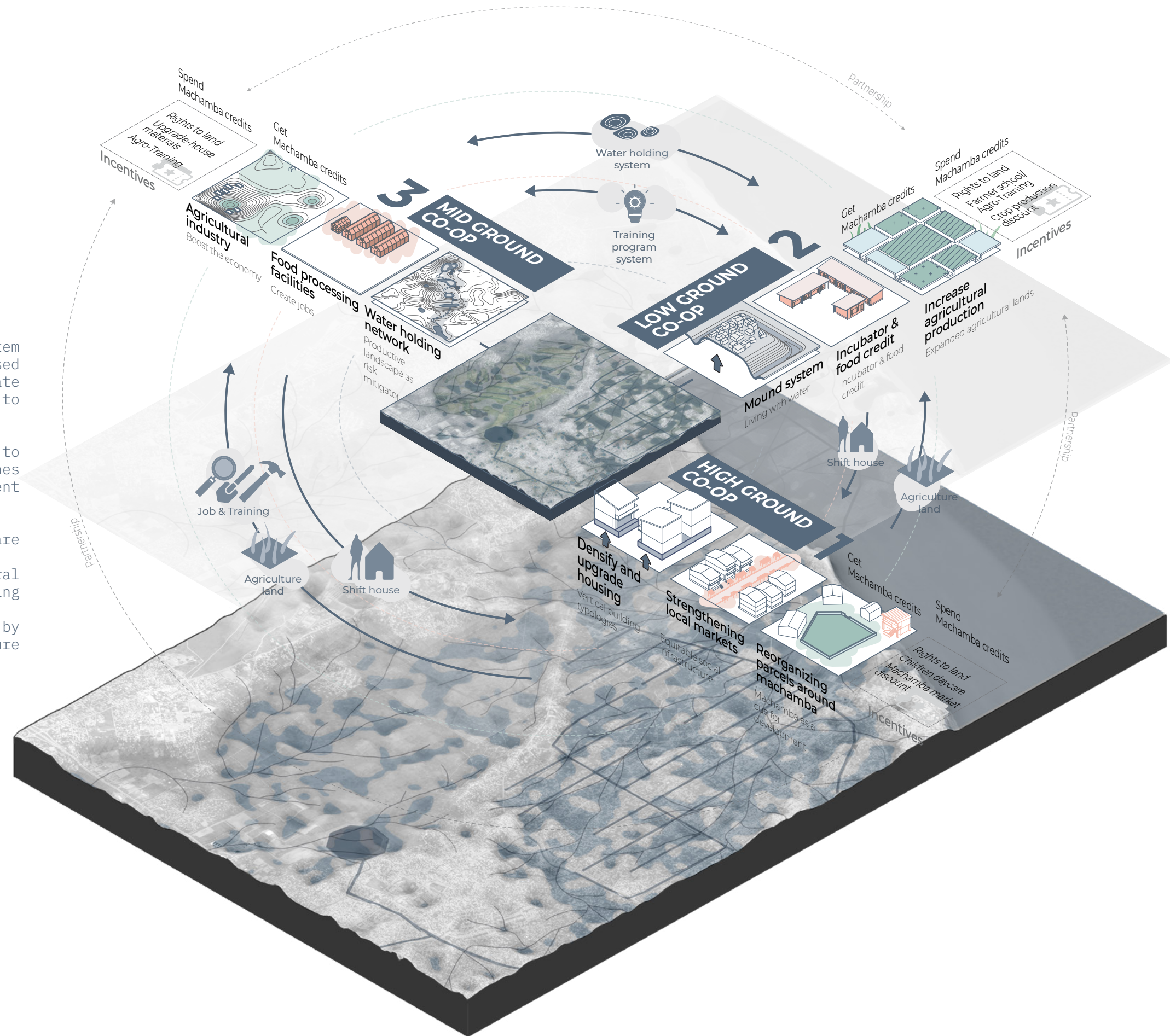
Beira 2020



Beira 1990s

Since before the colonial times, small scale agriculture has been embedded in the livelihoods of the people from Beira. This map depicts the correlation of the damaged areas of the city with the 10 historical agricultural neighborhoods defined by the Green Zones Office. In 1987, about 88% of the agricultural land in the city was considered a machamba. People started organizing in women led cooperatives and, in 1990, the General Union of Coops became an independent Coop Company. Lack of support from the government disincentivized members to work together, but their agricultural practices remained in their machambas.





Based on this water-holding system we propose three community based organizing frameworks to facilitate urban transformation according to different social contexts.

The overall objective is to strategically retreat to safer zones combined with community empowerment and economic development.

High Ground Coop - Provide welfare facilities / densify housing
 Low Ground Coop - Increase agricultural production and manage water holding systems.

Mid Ground Coop - Boost economy by scaling agriculture / aquaculture production.





Here the machamba system will seed the mid-ground in the form of a co-operative industry that can sustain the large scale agriculture surrounding it. With a strong expertise in machamba management, women can easily secure skilled jobs in these industries. Also the farmer training schools in the low ground can help farmers transition to a floating machamba system by piloting it in the existing reservoir.



Co-op can also help communities for land transformation and building floating machambas. Floating machambas production system can Guarantee food production in different climate condition as well as food diversity. The system does not rely on available fertile land; and it uses less space than conventional crop production, generating high yields of both vegetables and fish for consumption.

02

DISPERSING WELLNESS

*Urban Design Studio II
Fall 2019*

Site: Hudson Valley, New York

*Instructor: Kaja Kühl, Anna Dietzsch, Jerome Haferd,
Liz McEnaney, Justin Moore, Shachi Pandey, Raafi Rivero,
David Smiley, Dragana Zoric*

Team: Mansoo Han, Niharika Shekhawat, Shailee Shah

*Role in Team: Preliminary Research, Conceptual Design, Mode-
ling, Axonometric Drawing, Renders, Video Making, Community
Interaction, Interview*

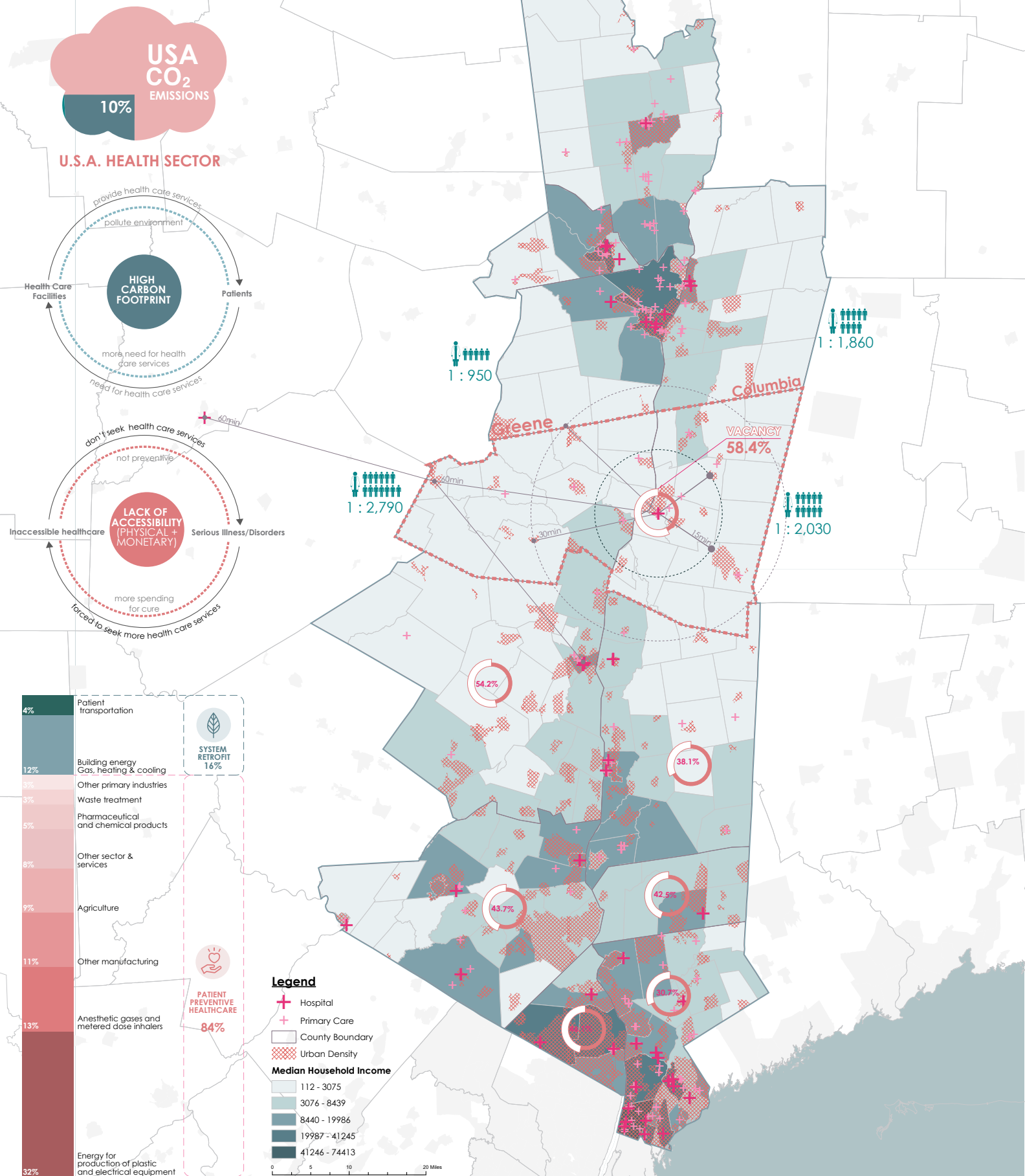


Site Model, Mansoo Han & Ting Zhang

USA produces an estimated 6,456.7 million tons of CO₂ every year. Healthcare industry accounts for 10% of the total greenhouse gases generated and has experienced a 30% increase in the rate of gas emissions from 2006.

In the Hudson Valley, geography of the region drives people's health seeking behavior, residents travel upto 1.5 hours one way for their basic health needs. At the same time, many hospitals in the Hudson Valley have 50% percent vacant bed space, that can be more efficiently repurposed.

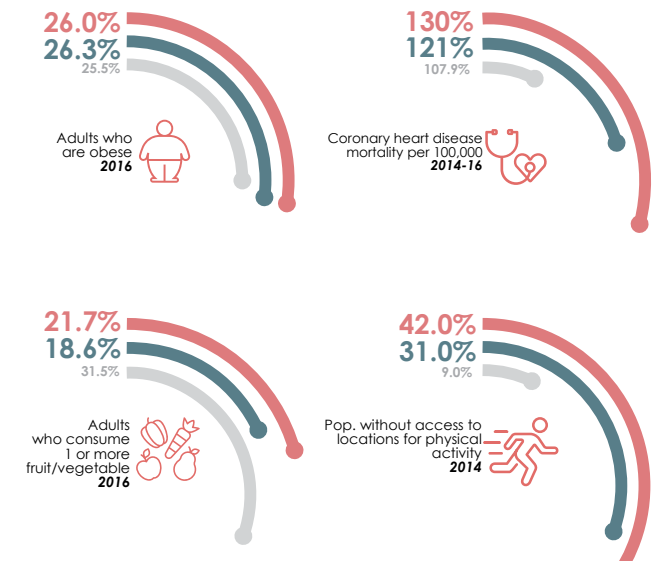
The project challenges and changes the perspective of the current healthcare system from being a measure of cure to an extension of health and wellbeing of the community. Therefore, we reimagine dispersion of wellness through an additive typology that empowers the role of social infrastructure to spread a wellness network in rural areas, that substantially lower the environmental impacts of the healthcare sector, and create an equitable and sustainable model.



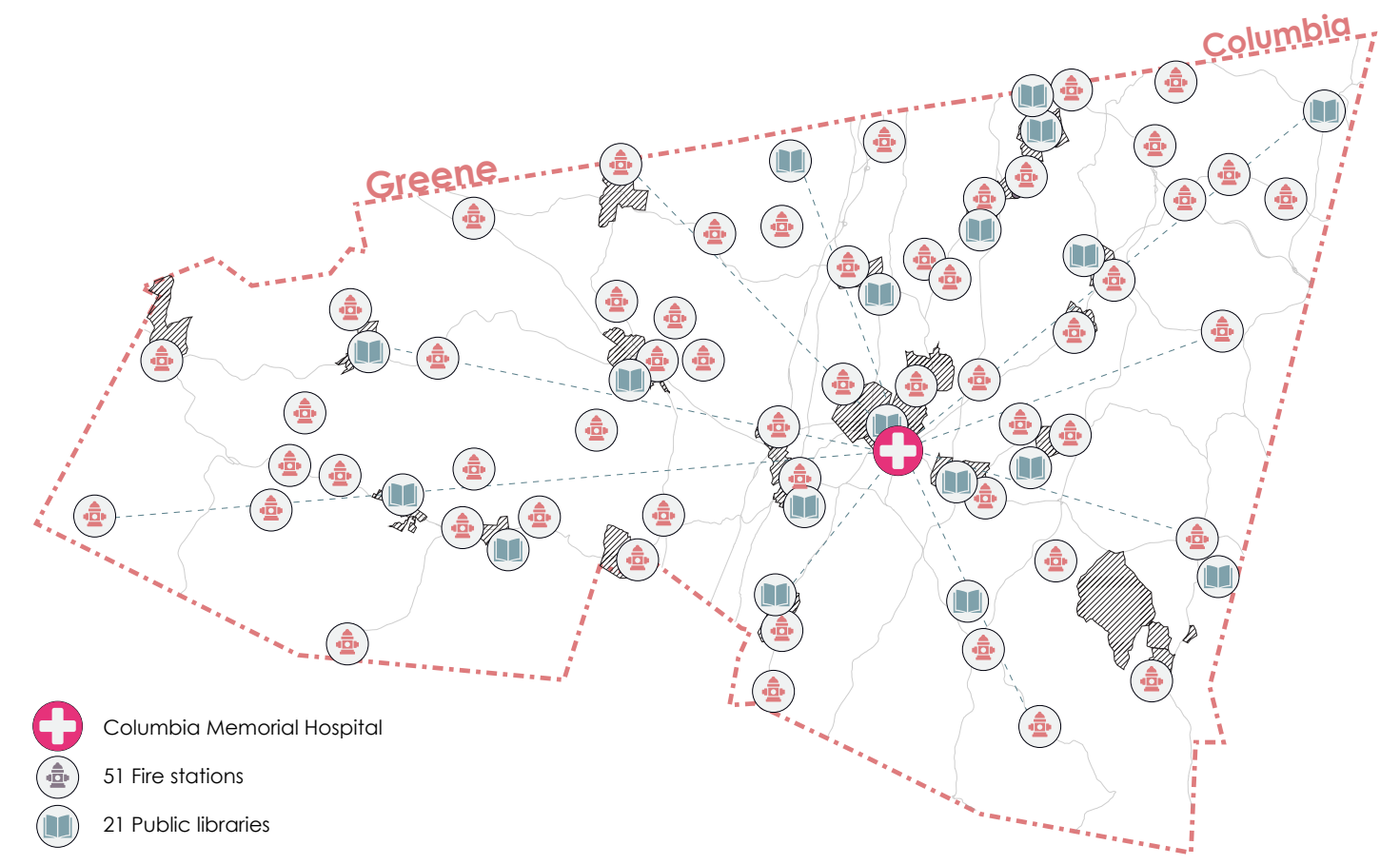
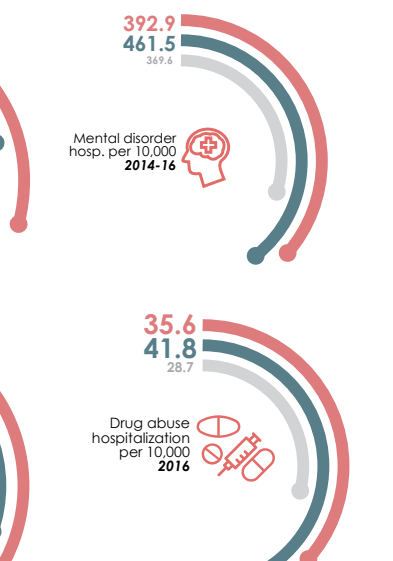
Population Age 65 and Over



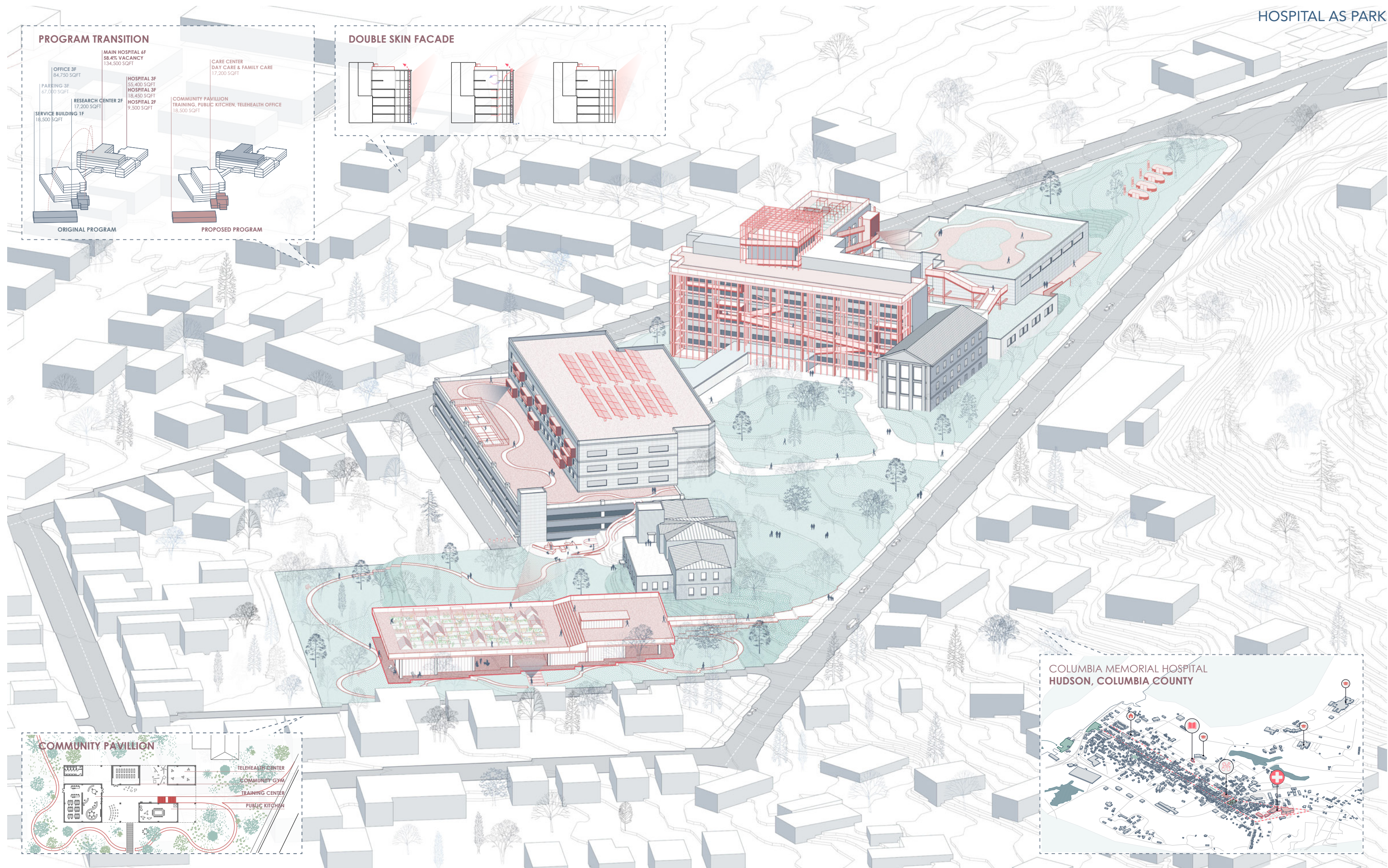
Chronic Disease Obesity & Diabetes



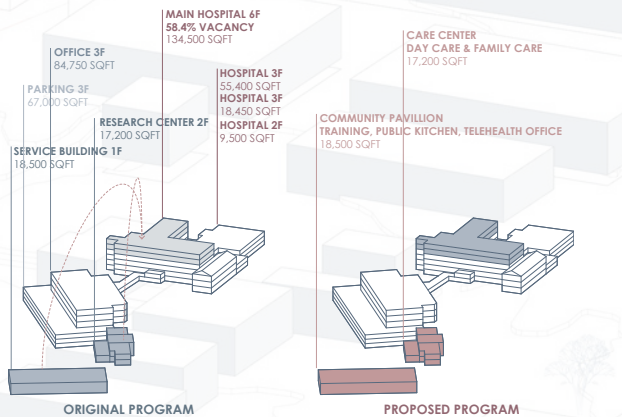
Mental Health Substance Use



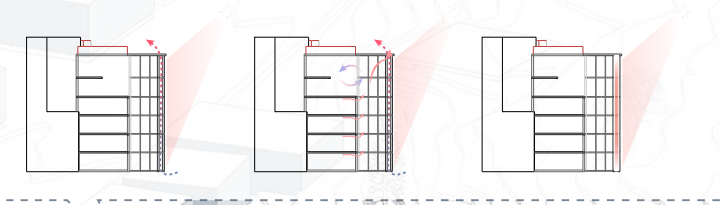
HOSPITAL AS PARK



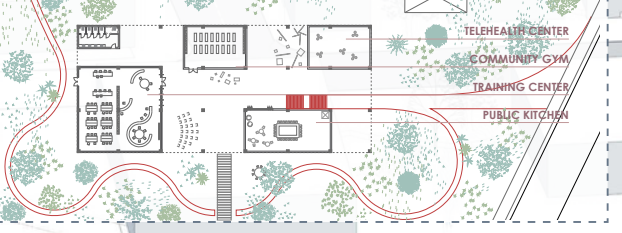
PROGRAM TRANSITION



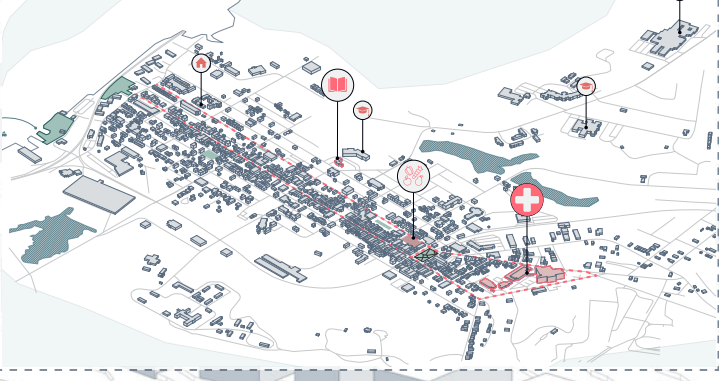
DOUBLE SKIN FACADE

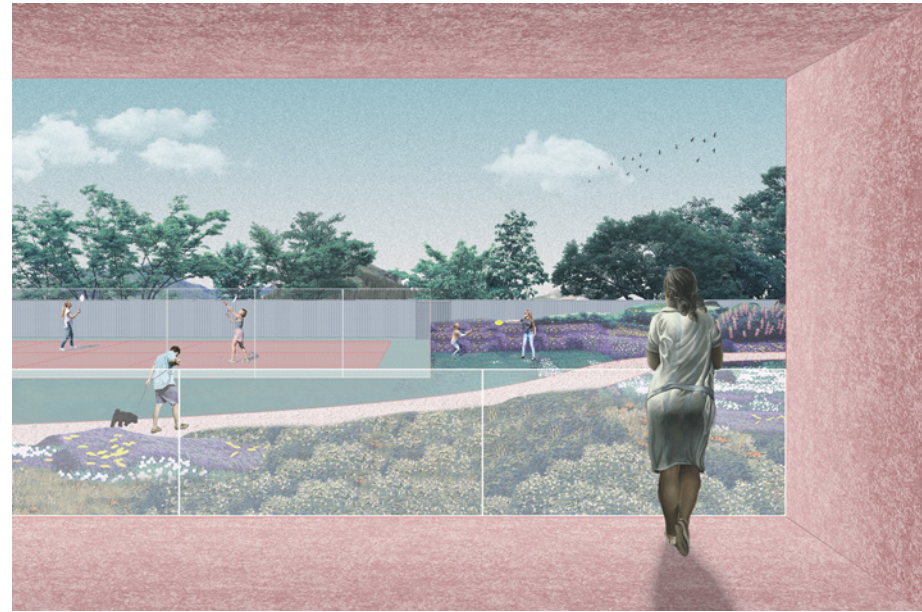


COMMUNITY PAVILLION



COLUMBIA MEMORIAL HOSPITAL
HUDSON, COLUMBIA COUNTY

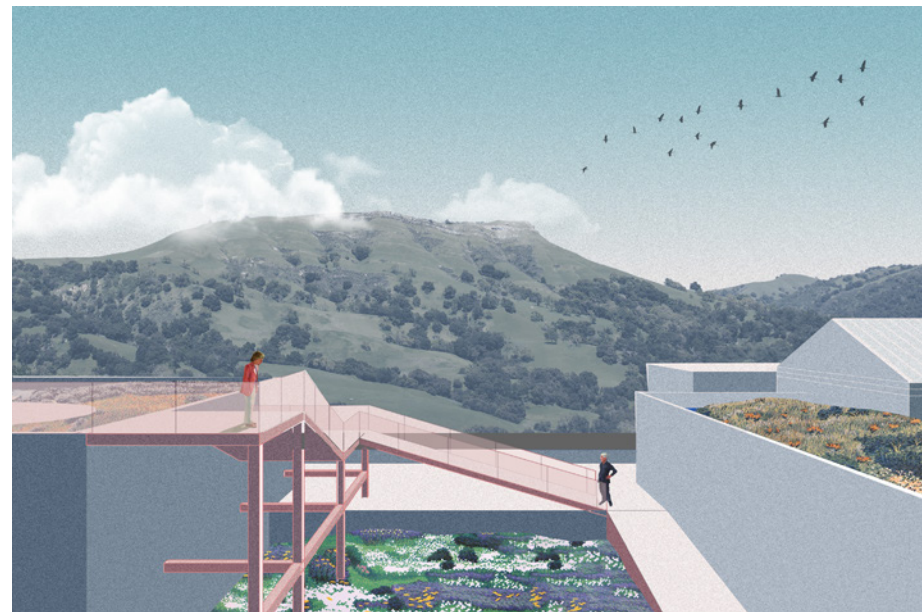




Pocket Window



Community Pavilion

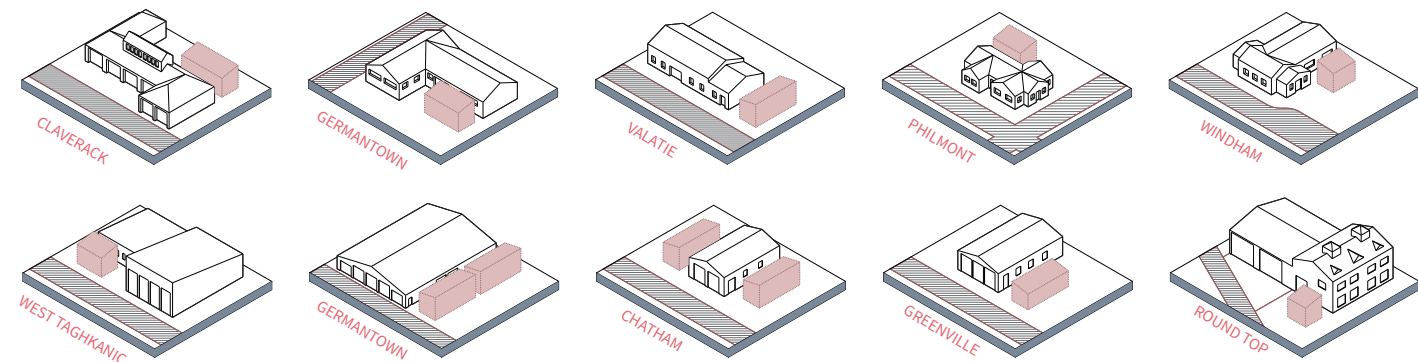
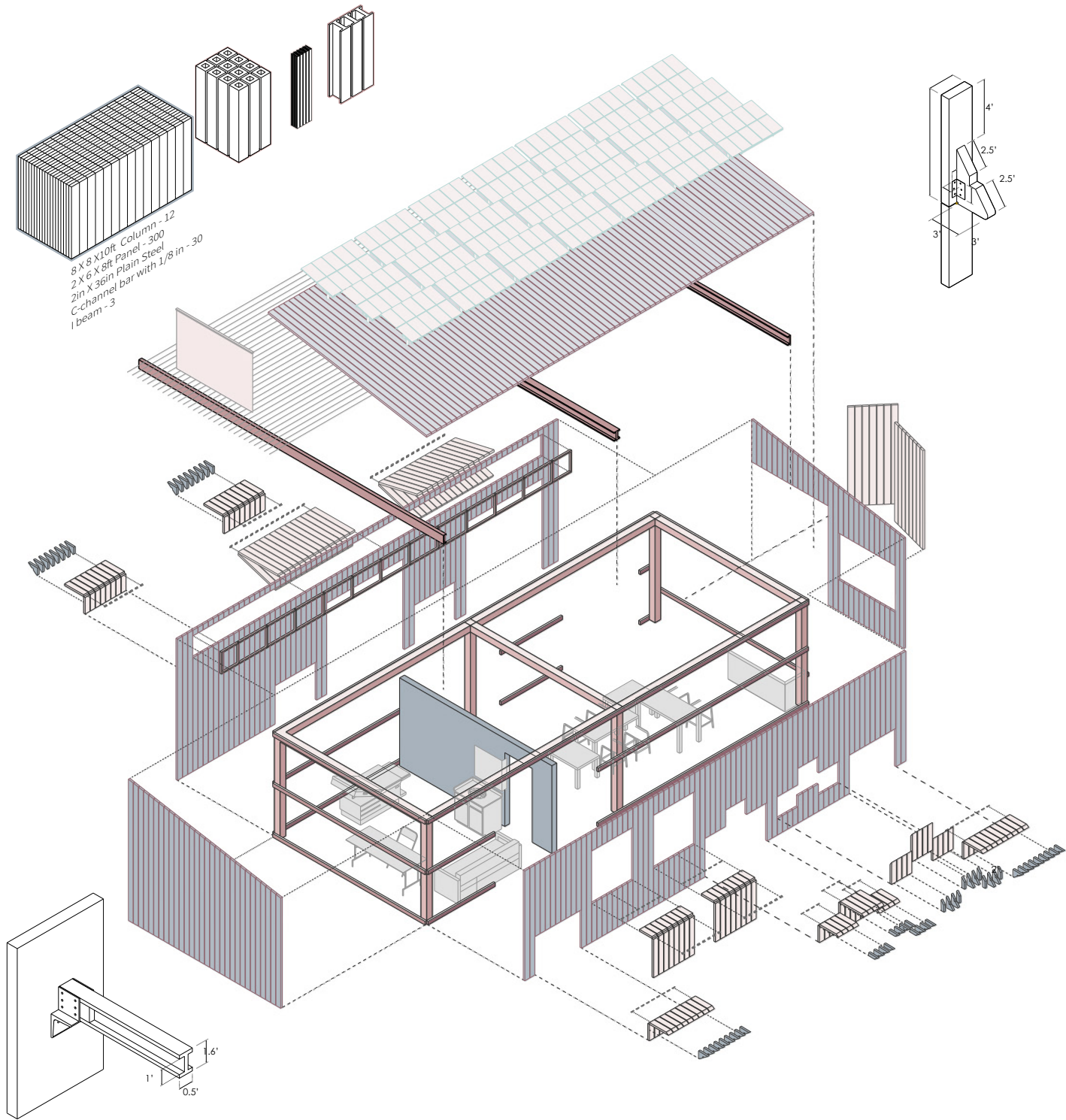


Stepped Green Roof

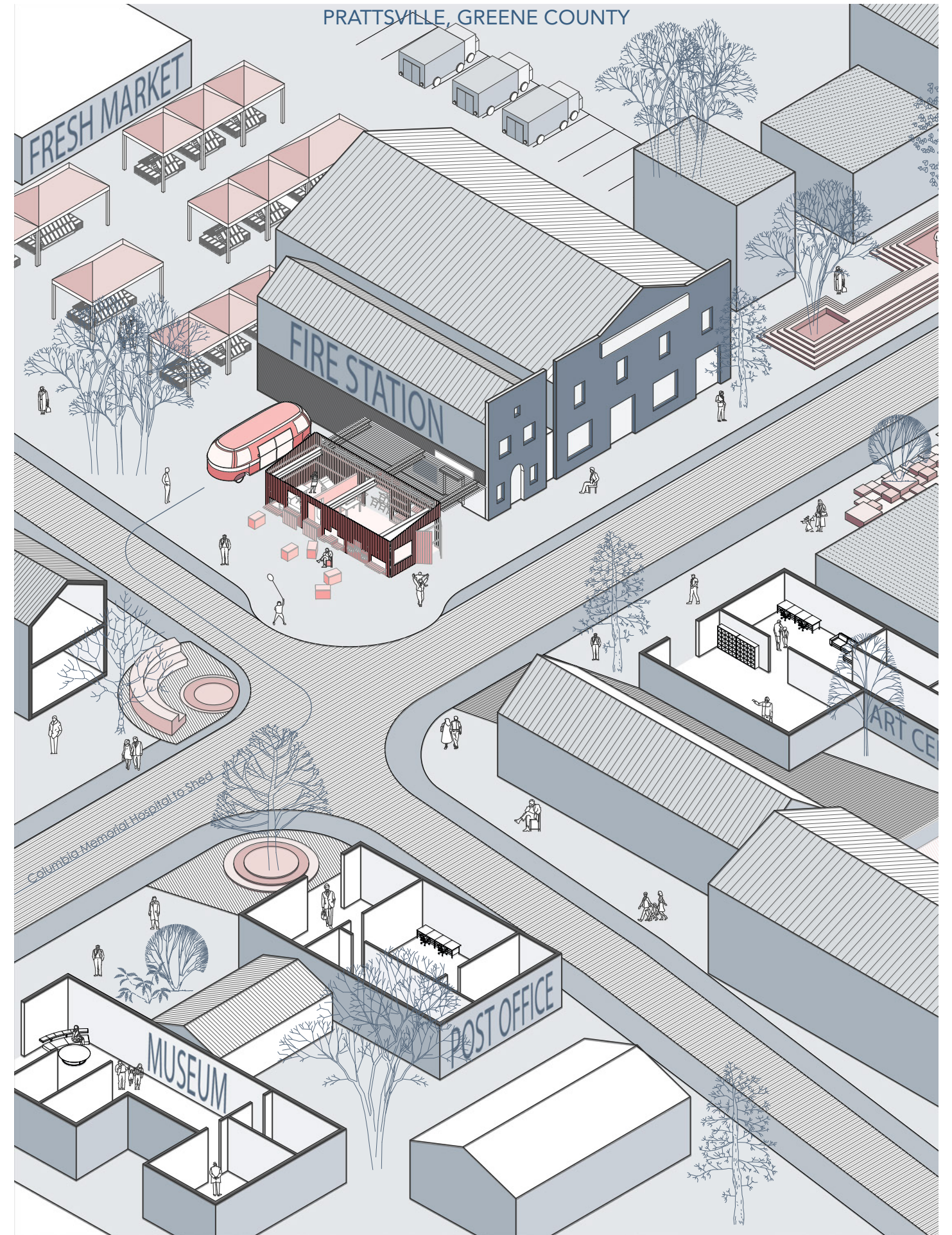


Children's Playground

RURAL AREA MODULAR SHED



PRATTSVILLE, GREENE COUNTY





Public Promenade



Shed As A Living Room



Storefront Healthcare



Healthcare Center

Presentation Video
Interview and Sketch Diagrams Included

To be healthy, I NEED PEOPLE I LOVE better play area	To be healthy, I NEED more community centers doctors	To be healthy, I NEED vegetables	To be healthy, I NEED to be nurtured & challenged near better parks	To be healthy, I NEED side walks in good condition + trees easily accessible + affordable healthcare	To be healthy, I NEED time to cook + eat walk more
To be healthy, I NEED MORE POOL TO WORK more doctors too expensive	To be healthy, I NEED central database for healthcare access to universal healthcare	To be healthy, I NEED communicate with our neighbors	To be healthy, I NEED water transportation to doctors	To be healthy, I NEED HUGS Doctors	To be healthy, I NEED social healthcare
To be healthy, I NEED help elders have access to healthy food transportation to get around	To be healthy, I NEED more housing smell the roses	To be healthy, I NEED walkable sidewalks, waste parks	To be healthy, I WILL try to get more sleep. BRING SOCIAL SERVICES TO ISOLATED PEOPLE	To be healthy, I WILL Speak out about Natural and homeopathic healing Provide info on proper and wholesome Nutrition	To be healthy, I WILL walk + run
To be healthy, I WILL Paint Garden Relax	To be healthy, I WILL Yoga + chair exercise connect with my community	To be healthy, I WILL Eat locally grown fresh fruit meditate + go to the gym	To be healthy, I WILL Exercise - At home - Try to see doctors - Keep busy - Plan eat Veggies - CIs	To be healthy, I WILL Walk + eat healthy music class	To be healthy, I WILL eat Better
To be healthy, I WILL Walk + run	To be healthy, I WILL CREATE AN ART + MUSIC CENTER SHOW UP!	To be healthy, I WILL promote wellness at work Retire	To be healthy, I WILL SHARE HEALTHY MEALS Together work and create with my surrounding community to help foster a more positive social environment	To be healthy, I WILL BE KIND FOR MENTAL HEALTH Avoid processed food	To be healthy, I WILL Social interaction

Community Interaction
Hudson, Columbia County, New York & Prattville, Greene County, New York

03

WASTE FRONT

*Urban Design Studio I
Summer 2019*

Site: Sunset Park, New York

*Instructor: Tricia Martin, Nans Voron, Hayley Eber,
Sagi Golan, Quilian Riano, Austin Sakong, Shin-pei Tsay*

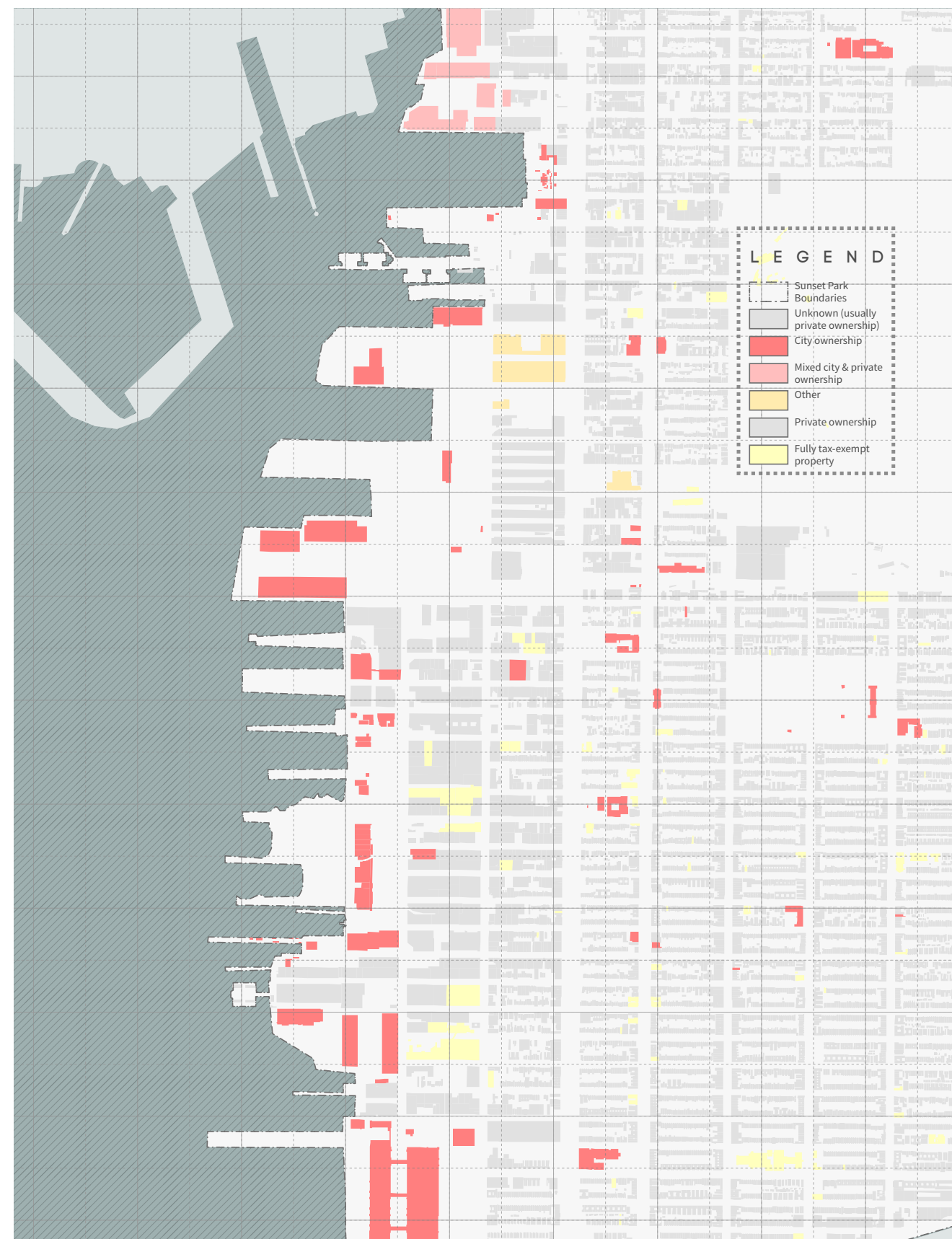
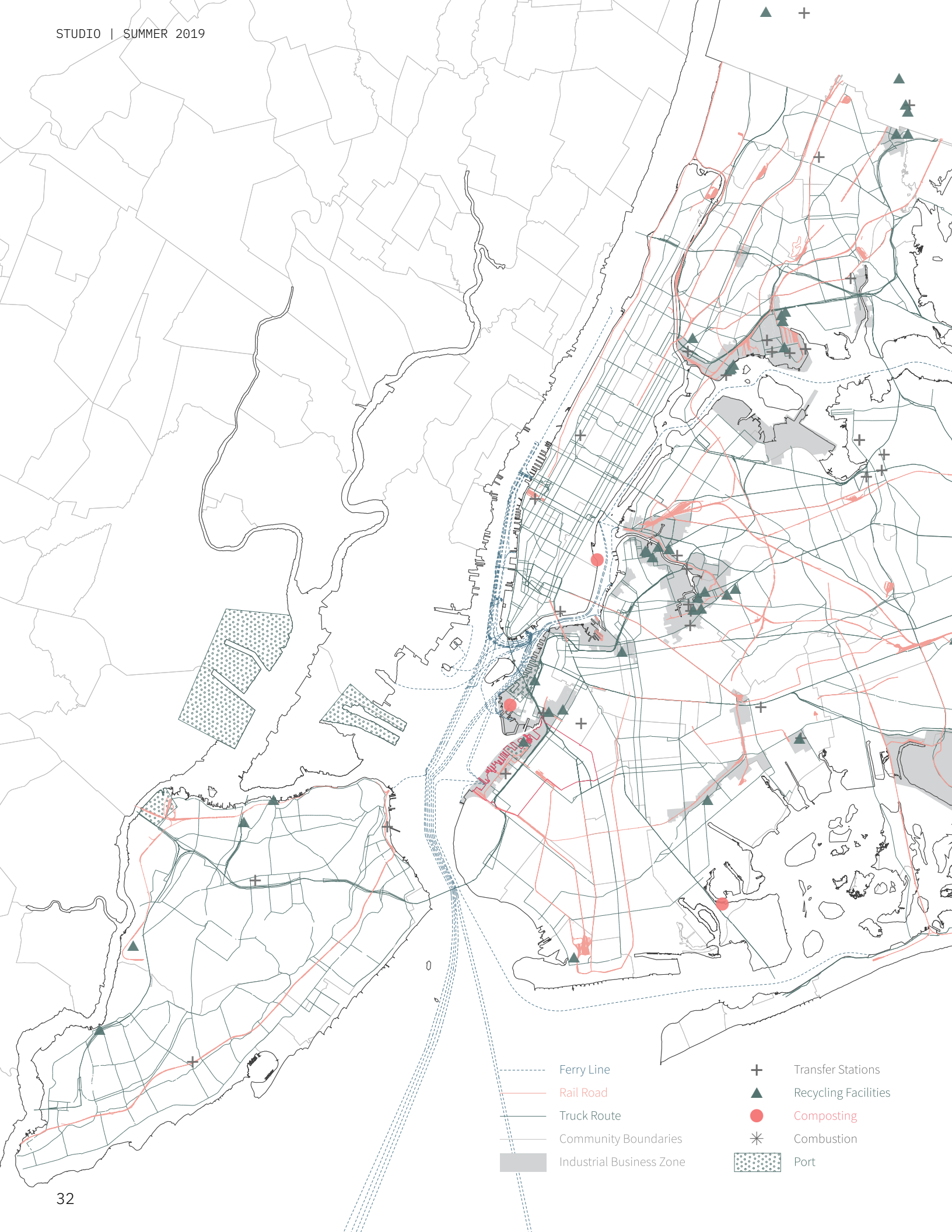
Research Team: Mansoo Han, Niharika Shekhawat,

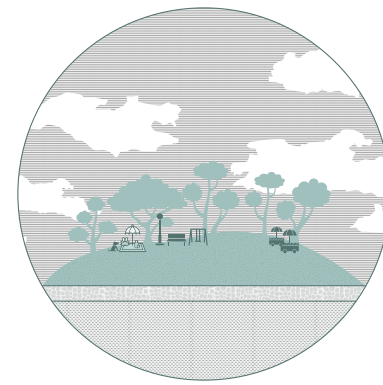
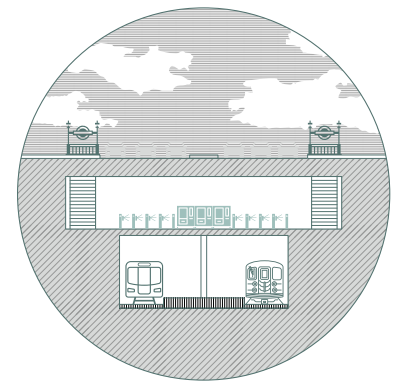
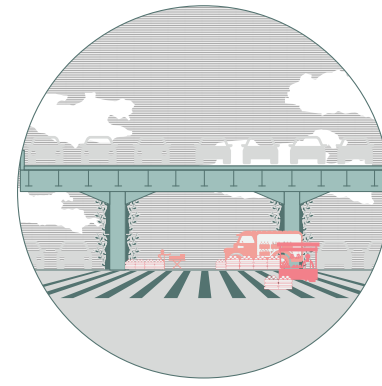
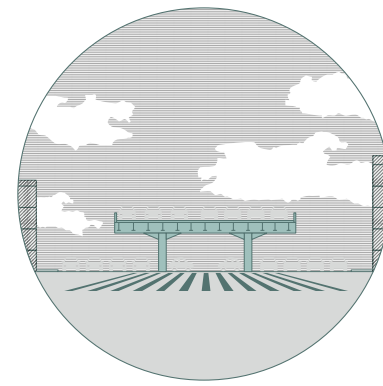
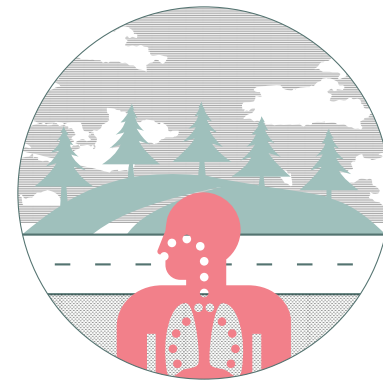
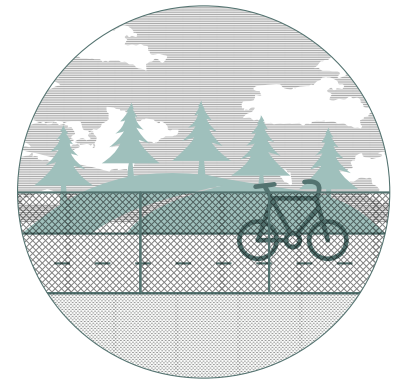
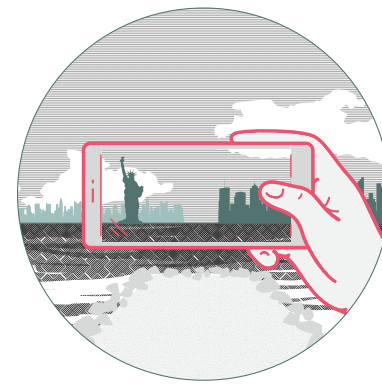
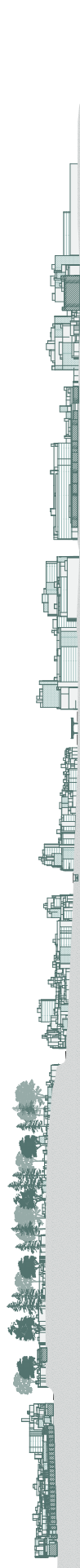
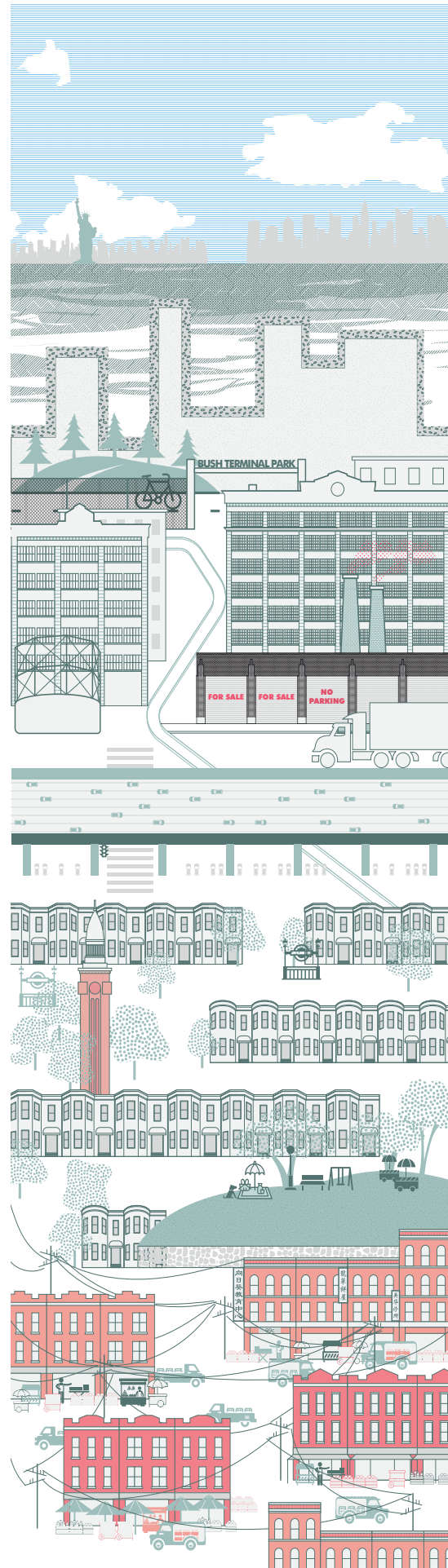
Design Team: Claudia Kleffmann, Vasanth Mayilvahanan

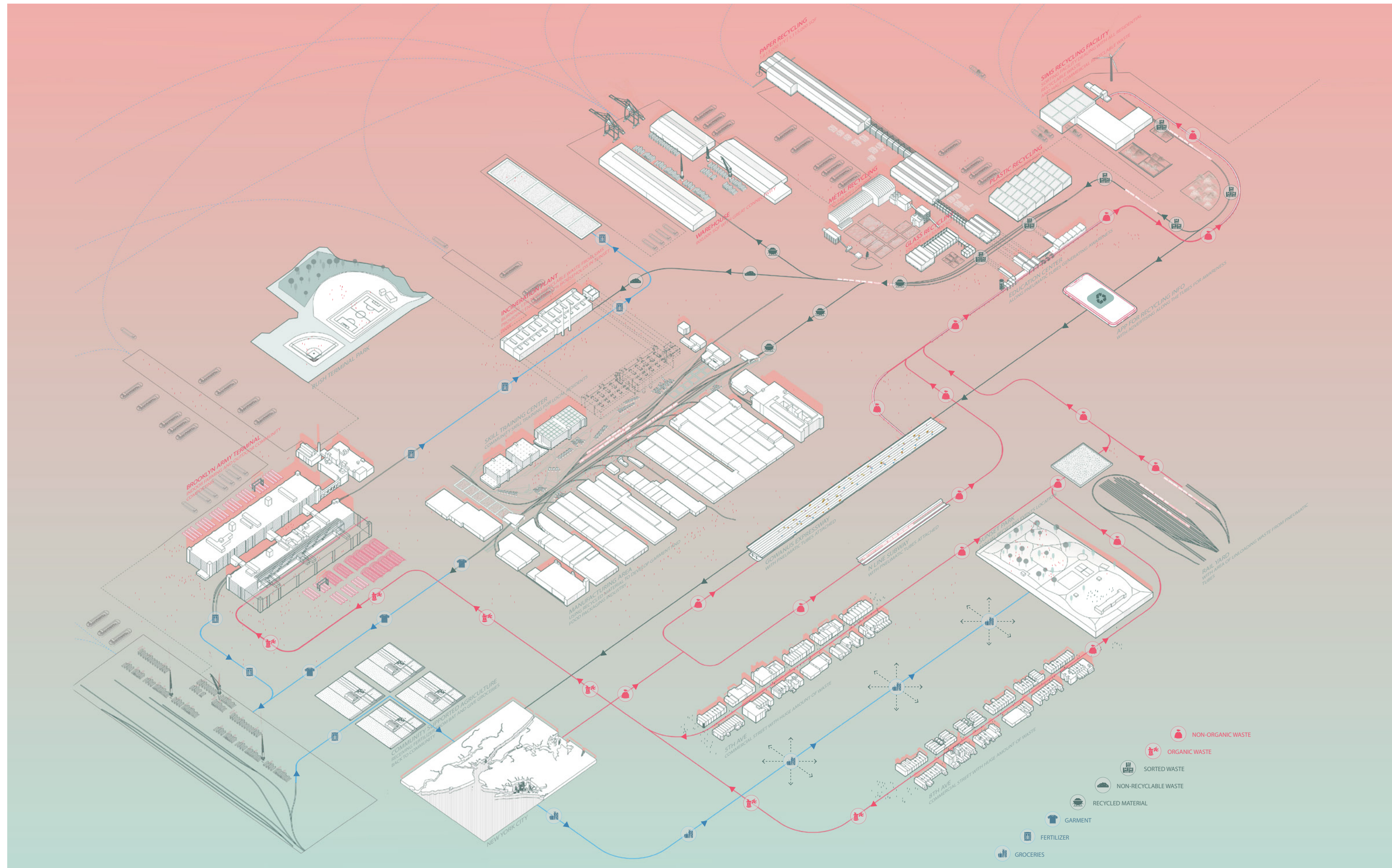
*Role in Team: Preliminary Research, Conceptual Design, Model-
ing, Axonometric Drawing, Renders, Video Making*

Sunset Park's Waterfront is an Industrial area which has multiple underutilized NYC properties that has a great connectivity, and it currently hosts SIMS, the facility which receives 100% of NYC's residential recyclable waste and sorts it for later recycling. But, all this residential waste only represents 25% of NYC's Waste Stream. The remaining 75% is Commercial Waste of which only 22% gets recycled. And this recycling happens scattered all over the city, costing a lot of money and polluting due to its distribution. This project proposes a Green Waste System that will manage and recycle NYC waste, by locating a number of processes in one specific area, therefore reducing transportation, money and time invested in recycling, creating an asset at Sunset Park that will give back to the community by providing jobs, education, public spaces and energy.













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_TITLE

End of the story...

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_EPILOGUE

Honestly, I was once a pessimist towards the present technological society where people are drifting apart from each other. However, my encounter with architecture helps me recognize the power of space and ignites my passion to explore a better living environment and a promoted city life, which leads to my decision to further my study, namely that provide a better setting for people to create their unique stories.
