Jess Chen

selected works

Website

Photography Collection

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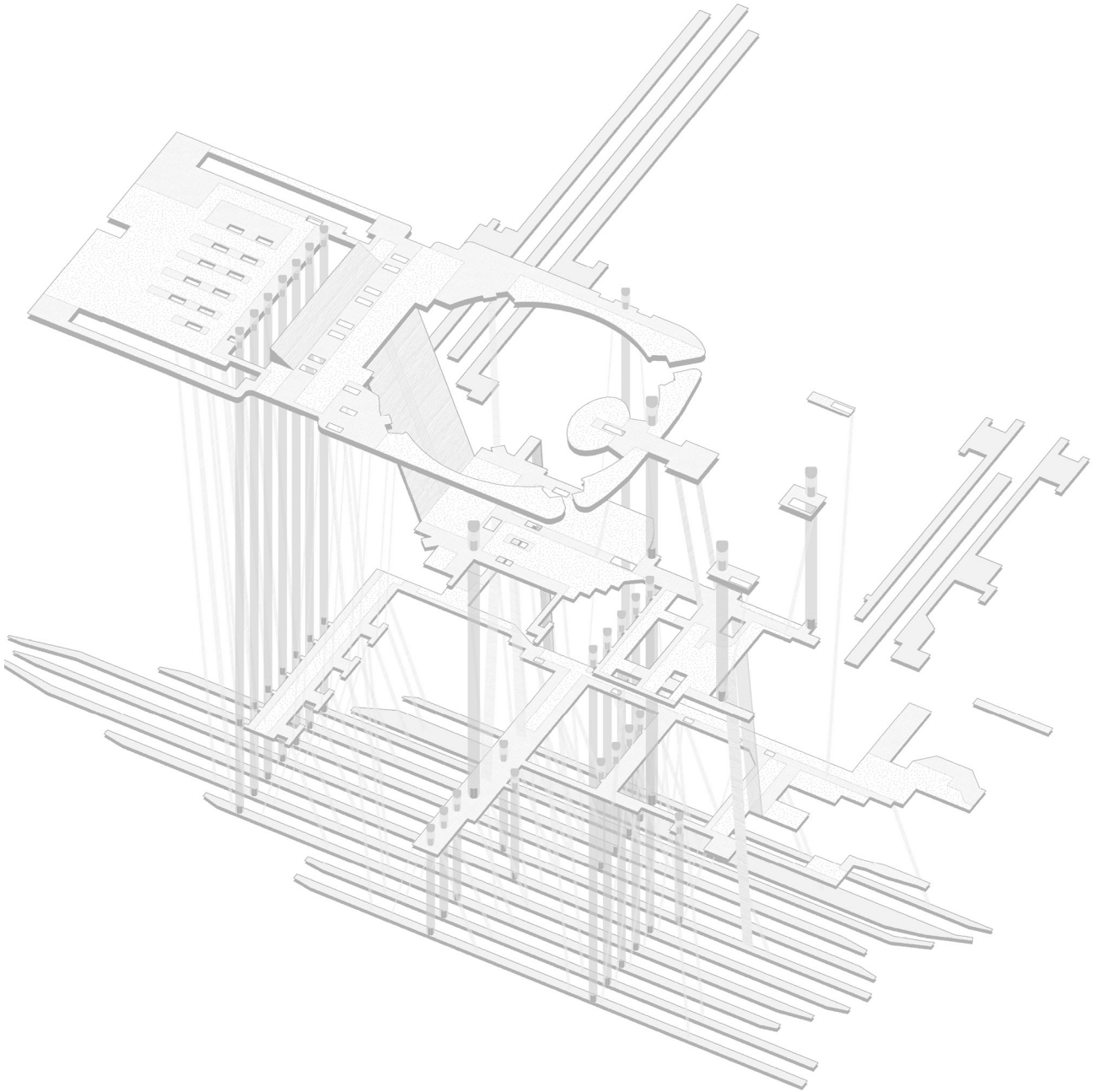
(323)719-3911



+ Urban Design _ COLLABORATION

Designing cities through dialogue and teamwork to create human-centered, sustainable spaces.

+ Architectural Design _ ORGANIZATION

Structuring complex ideas into clear, efficient, and thoughtful design outcomes, balancing creativity with technical precision to create practical and inspiring projects.

+ Research and Inspirations _ HIGH MOTIVATION

Driven by curiosity to explore patterns, histories, and human experience to shape inclusive, people-centered living environments.

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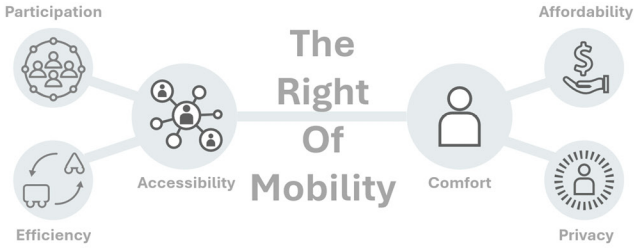
01 Thresholds of Mobility

/ Urban Connection by Integrated Public Transport

2024, graduate thesis project at UM

Duration July 2024 - Dec 2024
Instructor Kit McCullough
Location New York, US
Prototype Public Transportation System

Manhattan has diverse and comprehensive public transportation systems, whereas the independently operating systems can't promise accessibility for everyone. Focusing on the two sites, Midtown Mahattan (higher density area) and Lower East Side (lower density area), this project envisions integrated public transport with the aim of connecting the public and promising the individuals' comfort at the same time through rideshare systems, which further creates a lively and seamless transmobility urbanity.




in higher-density areas...


in lower-density areas...

YES/ achieving accessibility
BUT/ poor quality deterring people

YES/ achieving personal comfort
BUT/ unaffordable/inaccessible for some

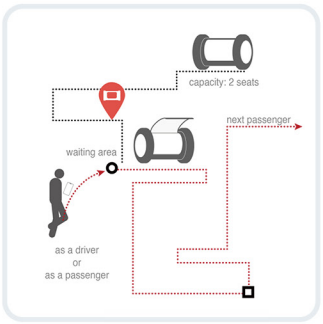
+ individual comfort



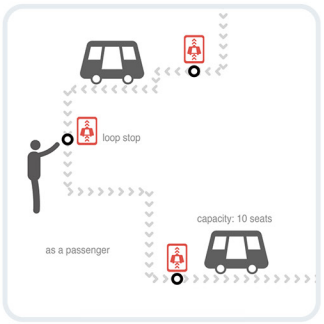


+ social interaction

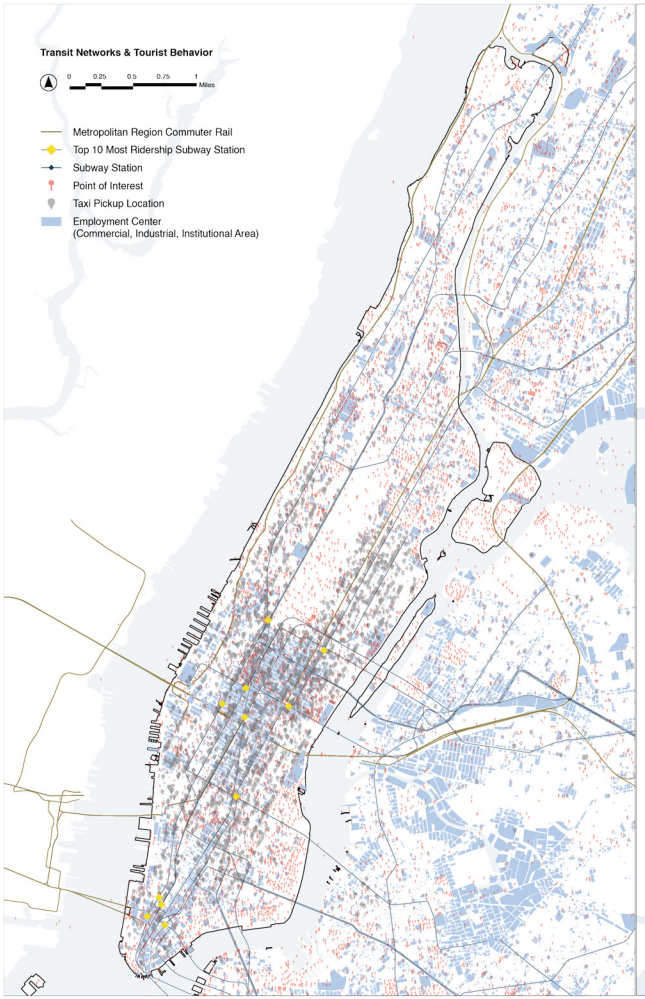
The CapsuleRide

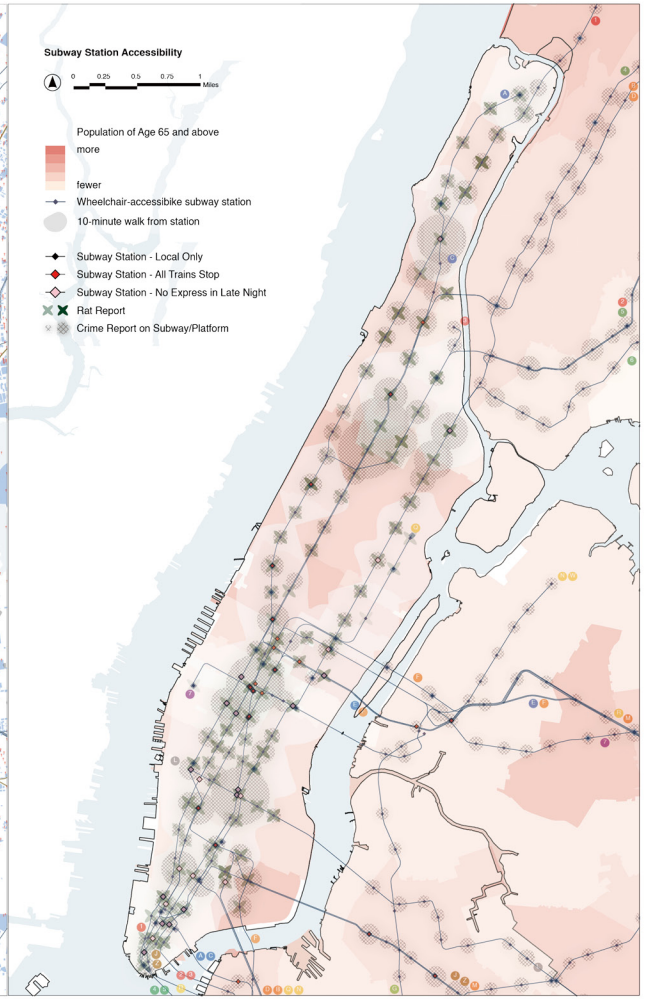


TheLoopRide



(all images created by Illustrator)

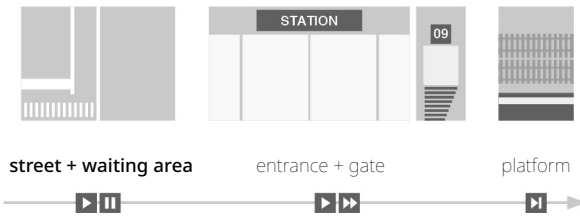





The layered transportation systems service 900 thousand residents, 1.7 million people working in Manhattan, and an additional million tourists. (GIS+Illustrator)


Less than 30% of subway stations are fully accessible. Also, safety and sanitary concerns and delays are the factors discouraging people from using buses and subways. (GIS+Illustrator)

proposed spatial sequence at a **Transport Hub**



proposed spatial sequence at a **Neighborhood Subway Station**



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The LoopRide ++

The CapsuleRide +++++

direction

Pursuing efficiency in dense areas, people take *the CapsuleRide* to offices, and the amenities and spaces around the station just meet the temporary needs of some passengers and passersby.

The direct escalator connecting the platform and the street allows **the businessman from NJ** to transfer to the office by biking, avoiding the dense and unventilated underground concourse.

Two solo travelers running into each other when one was troubled by the prospect of four transfers to the destination. They decided to share *the CapsuleRide* since their destinations were close. They grabbed the fast food together before parting ways.

Drawn to an unsual loud voice from the transport hub, **a travel photographer** noticed a large crowd gathered on the street waiting area watching the **baseball game broadcasting** on the giant screen.
It's a perfect time to capture the vibrant and collective joy and anticipation of strangers united by the game.

baseball broadcasting

Penn Station

pop-up concert

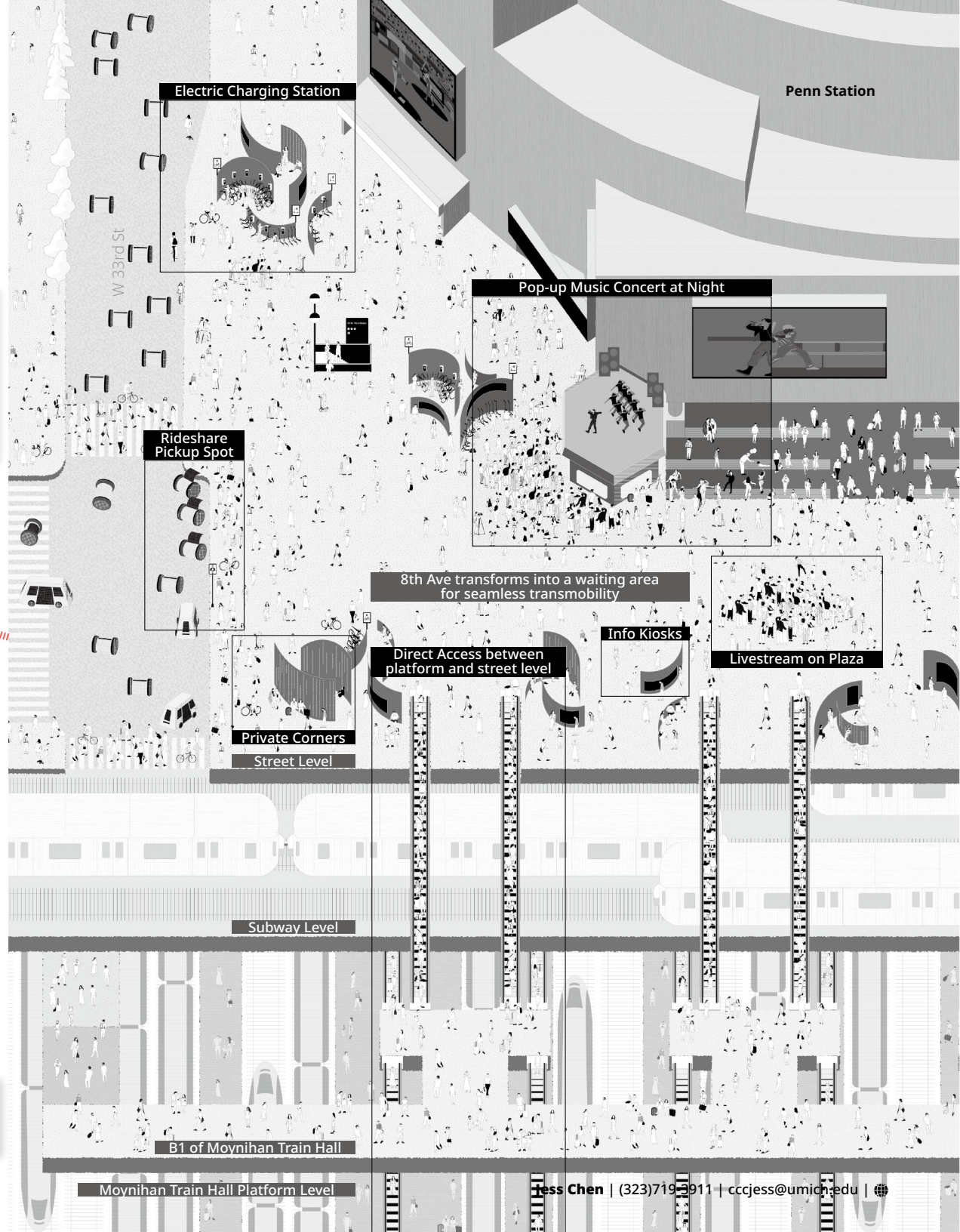
Some **local families** came to the transport hub to join this collective joy of cheering up for the baseball team.

A group of teenagers planned to hang out after school. The 20-minute ride limitation of *the CapsuleRide* system made this teenagers under 18 transfer at the transport hub, so they luckily happened to watch a pop-up idol performance on the street next to the hub.

A office worker had a dinner at the station after work with her friends before taking the train back to Long Island.

The parents felt reassured by the synced rideshare system on the app when their kids took *the CapsuleRide* alone.

(Rhino+Illustrator)



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The LoopRide +++++

The CapsuleRide ++

direction

The frequent LoopRide running between neighborhoods and subway stations can serve as a dollar van for certain neighborhoods, which is fully accessible for all kinds of people safely.

An old gentleman with his wheelchair took *the LoopRide* to the hospital and ran into **a young teenager** with her skateboard.
The girl helped him load on and invited him to her performance at the nearby park.

An NYU student met **a travel photographer** on her way to the campus on *the LoopRide*.
Sharing some hidden local food with him, which she got from **an old lady** she met every Thursday who lived a block away and loved to talk gossip.

A family from Brooklyn was visiting friends in Manhattan.
They decided to take the subway even with a 1y baby in a stroller.
The ramped plaza was the nice playground for the kids and parents took the chance to chat with other families.

8st - NYU

W

R

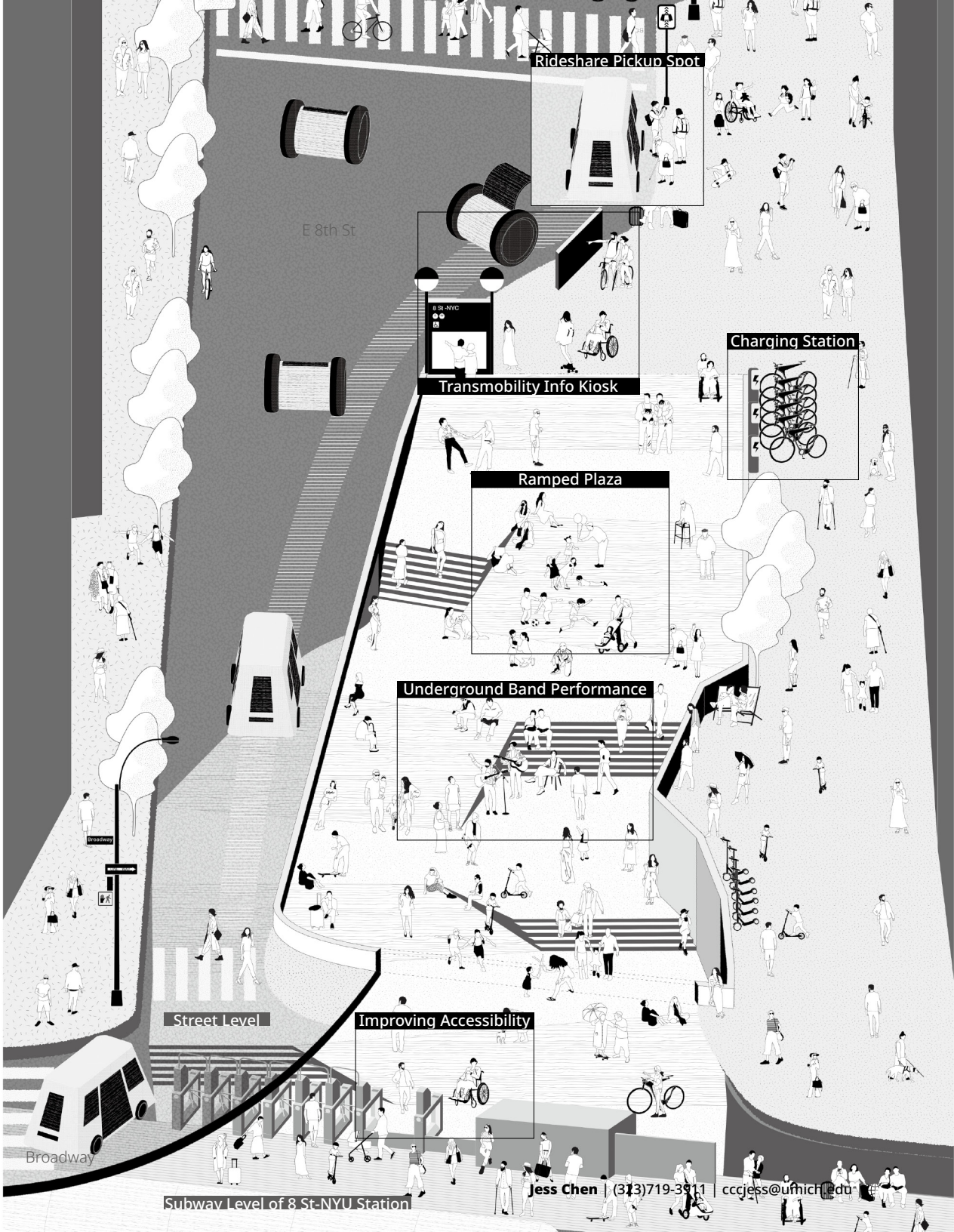
A locally renowned underground band was performing on the ramped plaza.

Passersby exiting the subway were drawn to the music and chose this exit to catch the performance.

A man who lived far away from the subway station jogs and rides the bicycle to the subway station to commute to work 2 days a week.

A couple visiting Manhattan was drawn to the riverfront attractions, which was out of the geographic service area of *the CapsuleRide*, but they can take *the LoopRide* after their transfer from the hotel by *the CapsuleRide*.

(Rhino+Illustrator)



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02 Foaming by Earth - Wet Island Effect

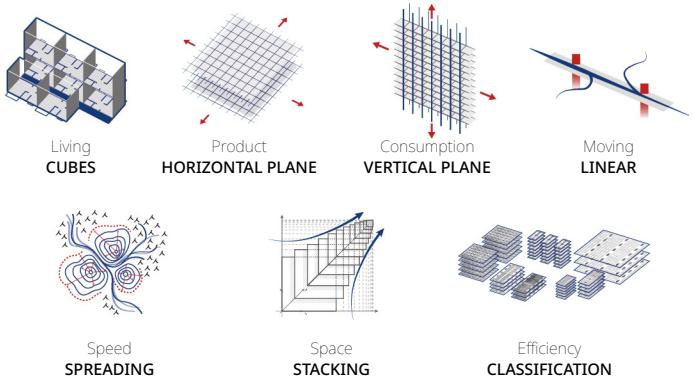
/ Urban sprawl, land use, open space and soil in Taipei

2021, undergraduate thesis project at THU

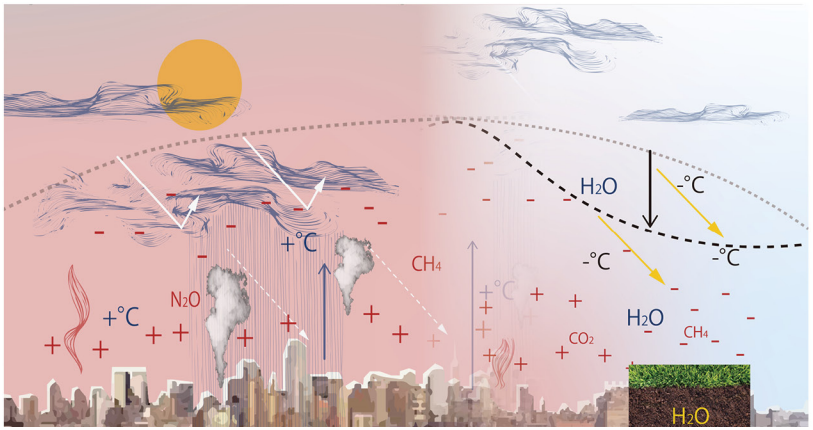
Duration Sep 2020 - May 2021
Instructor Chia-Shun Liao
Location Taipei, Taiwan
Prototype School / Mall / Exhibition Center / Metro Station / Sports Center

"SOIL" is a crucial element in shaping terrain, which in turn forms the urban environment. Additionally, incorporating slopes and hills can introduce hierarchy and diverse connections, as opposed to a flattened, orthogonal configuration.
In modern cities, by horizontally spreading and vertically stacking, endless urbanization offers human beings more space to live. However, it flattens the urban condition. The urban heat island may never be cooled down.
To address urban climate challenges, the concept of a "***Wet Island Effect***" is proposed—a system designed to mitigate climate phenomena and optimize land use in modern cities.

Urban Sprawl (Illustrator)



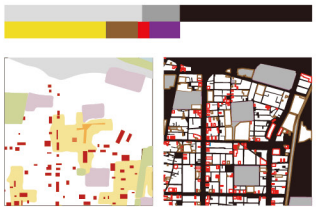
Flatten Urbanization & Wet Island Effect
(Photoshop+Illustrator)



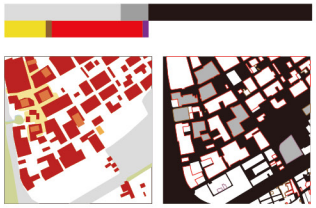


Location and Land Use (Illustrator)

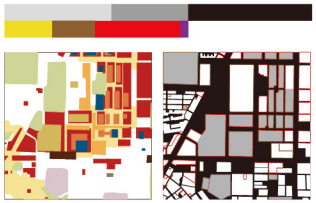
LOCAL /



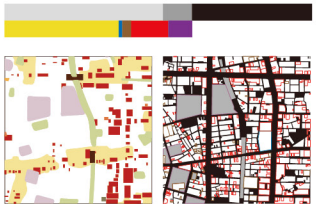
REDEVELOPMENT /



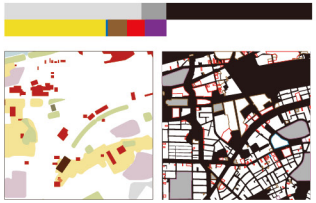
CBD /



AMENITY /



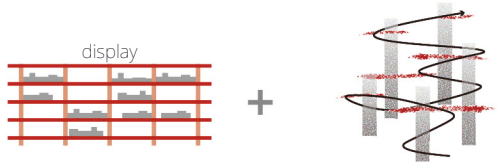
MIX-USED /



Space & Soil Configuration (Illustrator)



Beneath the track, there are classrooms providing more spaces to the neighborhood as after-school classes, workshop, or enrichment programs as well as sports fields.



Browsing goods, people can roam in the mall in different levels. Slope shapes the mall into a mountain-like park in a city. There are some floors providing public space, such as reading area, kids playground, and lounge.



Grid structure provide spacious floors for special fairs and the roof with soil and plants, and a few interior spaces for permanent exhibitions.



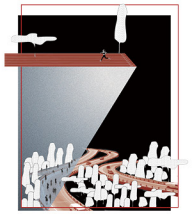
Along with the MRT entrance, small events like market or busking can be hold under the shade of the slope and trees. Linear parks are several green belt among the city.



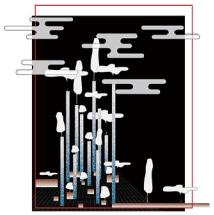
As a main element in the building, spectator seats shape in round. The building is not only a sports center but also a container of disposal soil from earthworks, getting higher along with the increase of soil.

Vision images (Illustrator)

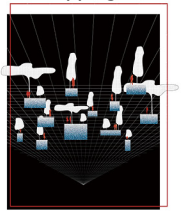
Sports Field Roof



Raoming Mall



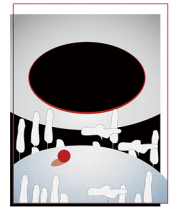
Overlapping Fair



Linking Market



Ring Sports Center



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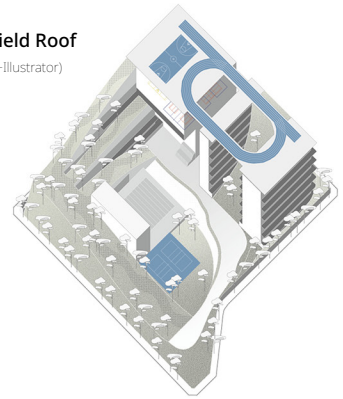
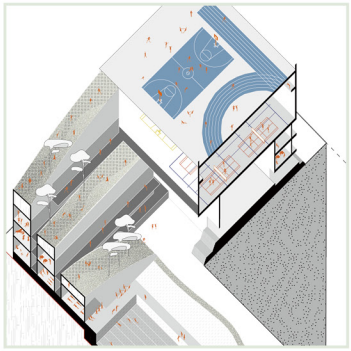
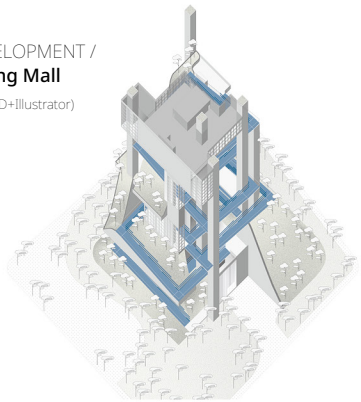
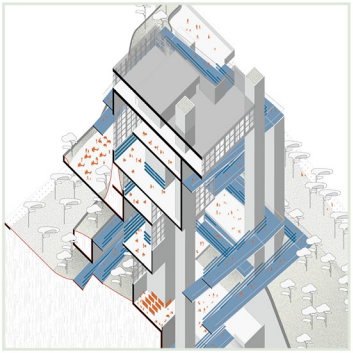
LOCAL /
Sports Field Roof
(Rhino+CAD+Illustrator)



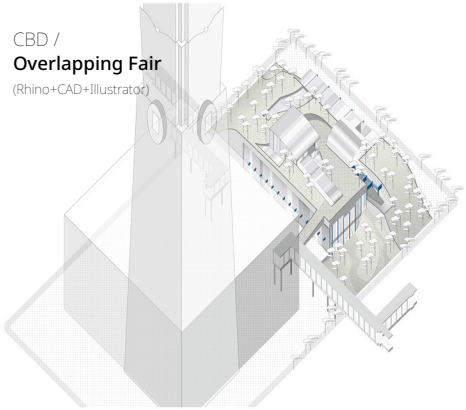


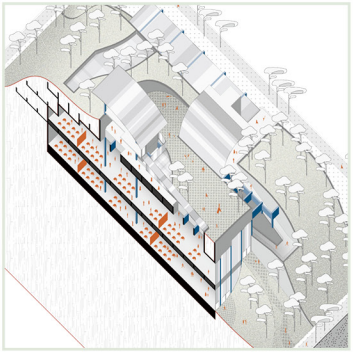
REDEVELOPMENT /
Raoming Mall
(Rhino+CAD+Illustrator)



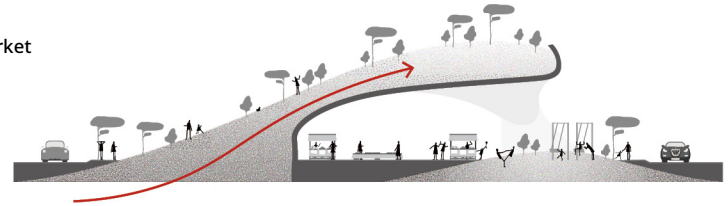


CBD /
Overlapping Fair
(Rhino+CAD+Illustrator)



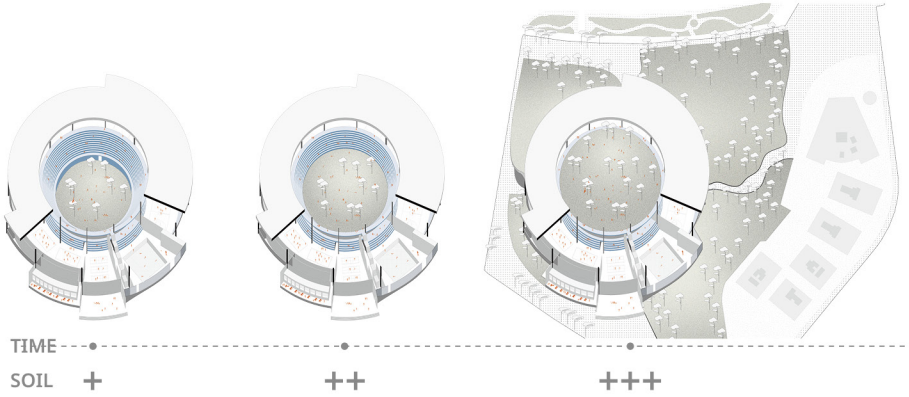


AMENITY /
Linking Market
(Illustrator)

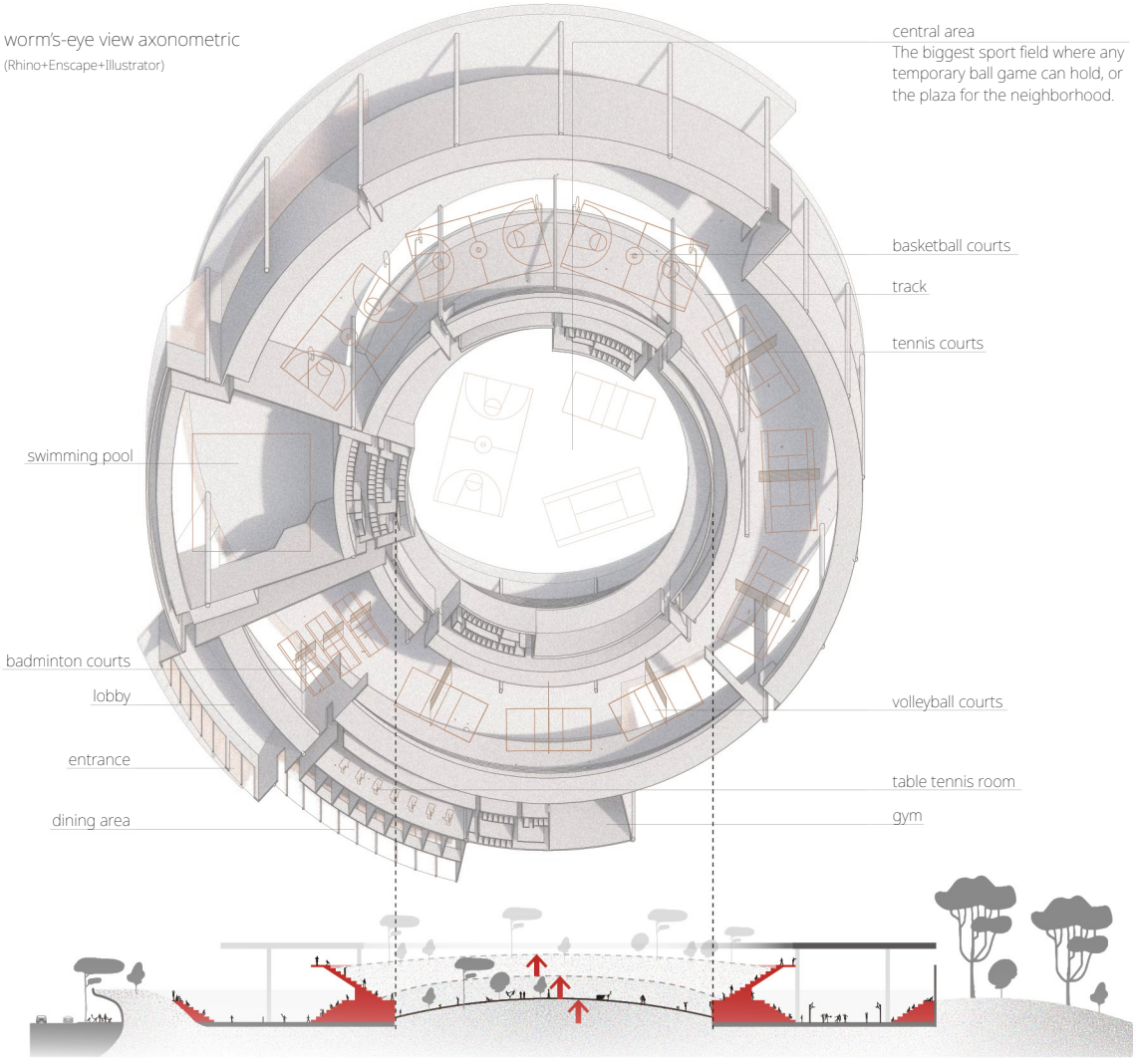


MIX-USED /
Ring Sports Center
(Rhino+CAD+Illustrator)

As the urban ecosystem carriers, this type of building is islands scattering over the city. They are the infrastructures that can store soil and water, the façade of public areas, and the monuments of the high temperature in the city.



worm's-eye view axonometric
(Rhino+Enscape+Illustrator)



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03 Downtown Data Commons

/ Mobilizing Education and Technology as Social Infrastructure

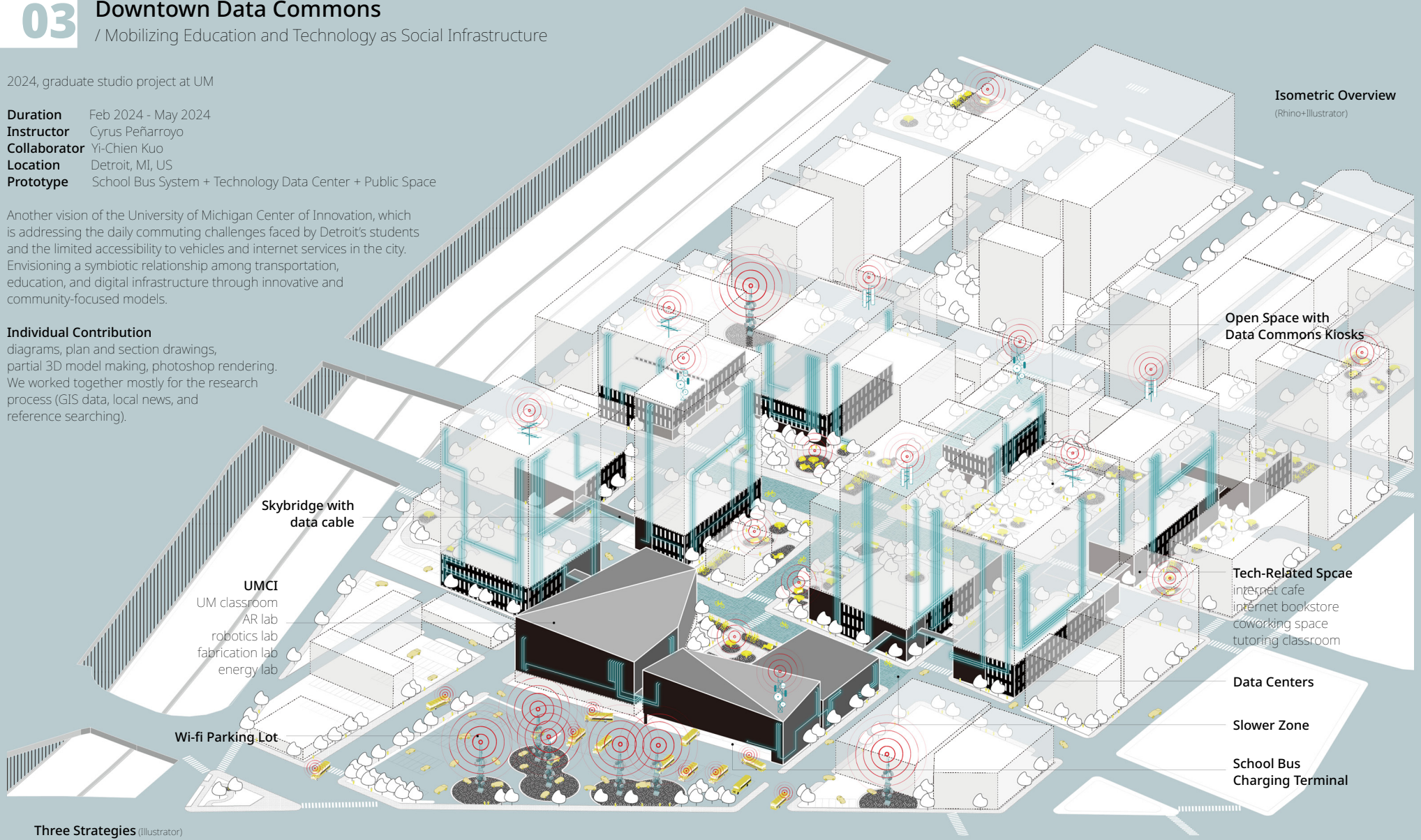
2024, graduate studio project at UM

Duration Feb 2024 - May 2024
Instructor Cyrus Peñarroyo
Collaborator Yi-Chien Kuo
Location Detroit, MI, US
Prototype School Bus System + Technology Data Center + Public Space

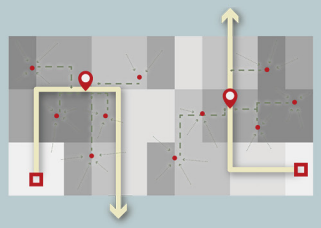
Another vision of the University of Michigan Center of Innovation, which is addressing the daily commuting challenges faced by Detroit's students and the limited accessibility to vehicles and internet services in the city. Envisioning a symbiotic relationship among transportation, education, and digital infrastructure through innovative and community-focused models.

Individual Contribution
diagrams, plan and section drawings, partial 3D model making, photoshop rendering. We worked together mostly for the research process (GIS data, local news, and reference searching).

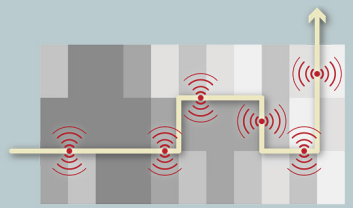
Isometric Overview
(Rhino+Illustrator)



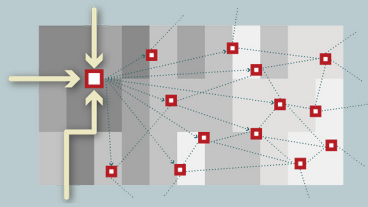
Three Strategies (Illustrator)



COMMUNITY HUBS
Abandoned schools converted into communal facilities offering cooperative carpooling to guarantee children's safety.



MOBILE HOTSPOTS
Vehicles serve as data carriers to transfer information and share wi-fi across Detroit.



CITY DATA COMMONS
Downtown Digital Commons symbolizes the source of the power for the public to access digital knowledge.

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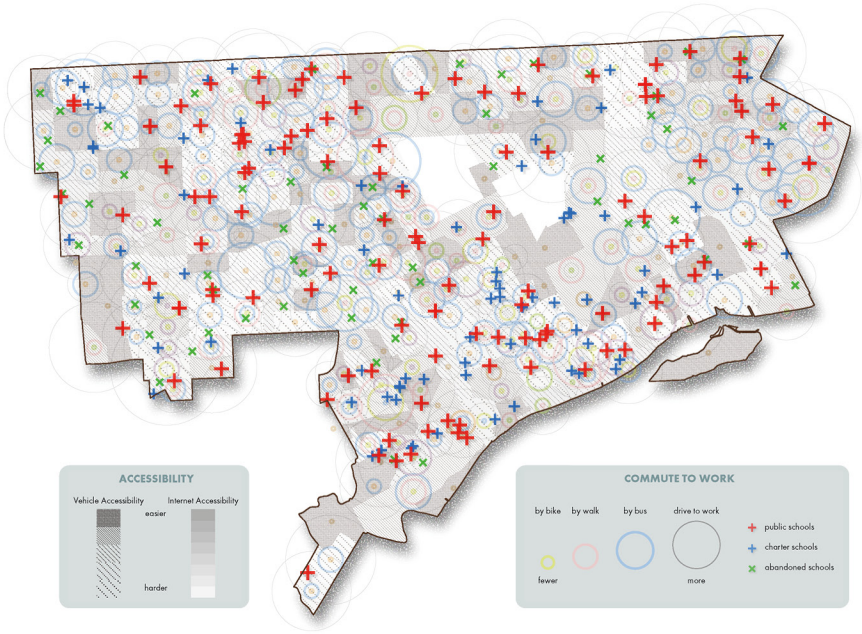


GROUND FLOOR PLAN

(AutoCAD+Illustrator)

Tech-related spaces for UM:
bus terminal / charging station
UM classrooms / workshops
AI / Robotics / Climate labs

Tech-related spaces for PUBLIC:
coworking spaces
internet bookstore / cafe
student study rooms



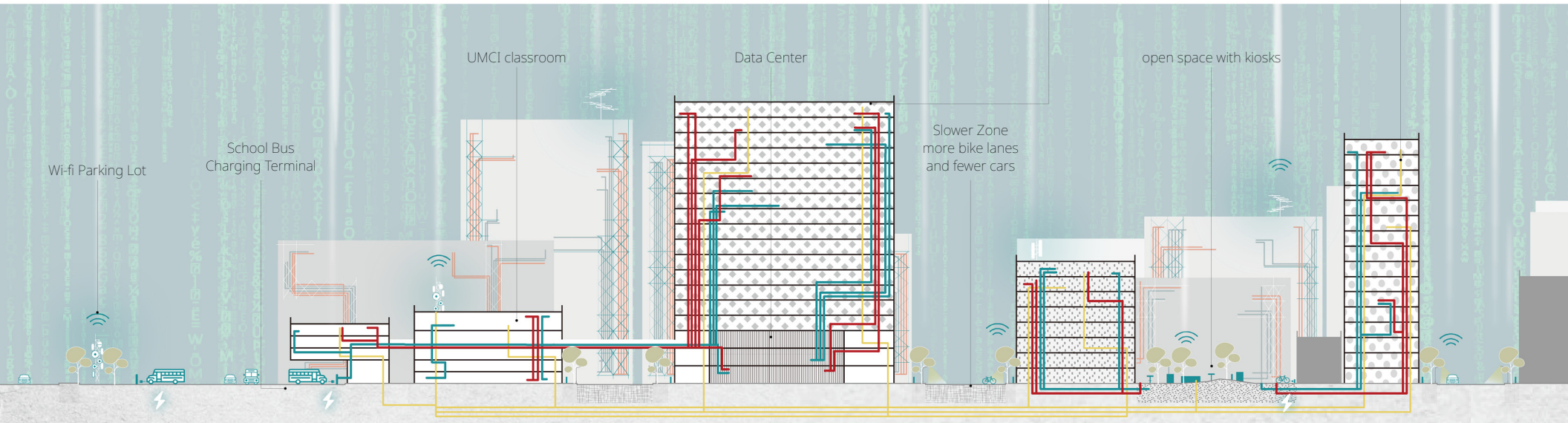
MAPPING of Commute Way and Accessibility

(GIS+Illustrator)

Students and parents in Detroit are facing the challenges of bus delay and long commute time.

The heat generated from the data centers can be reused on the upper floors of buildings like hotels, offices, and housing units.

To improve low access to the internet, Rocket Fiber has the potential to popularize Detroit's technology resources.



SECTION (Rhino+Illustrator)



program
- data center
- UMCI /tech-related
- residential
- commercial

program
- retail
- recreational
- parking tower

pavement
- sidewalk
- slower zone
- greenary

connection
- heat pipe
- data cable
- internet fiber

0' 50'

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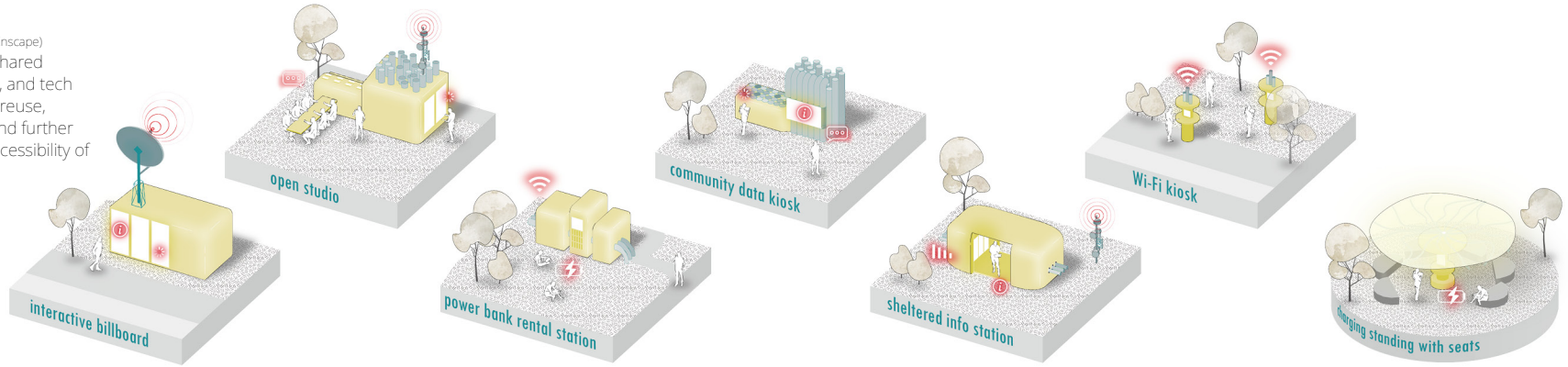
COMMUNITY KIOSKS (Rhino+Enscape)
Connect local residents with shared resources, cultural showcases, and tech amenities by supporting data reuse, providing charging stations, and further fostering collaboration and accessibility of high-tech interactions.



DOWNTOWN DATA COMMONS (Rhino+Enscape+Photoshop)
An isometric view of Downtown Detroit shows the spatial relationship between general programs (housing, commercial, retail, and hotels) and the tech-related spaces (colored in black) and the connection by sky bridges, cables, and the open spaces with kiosks on the ground level.

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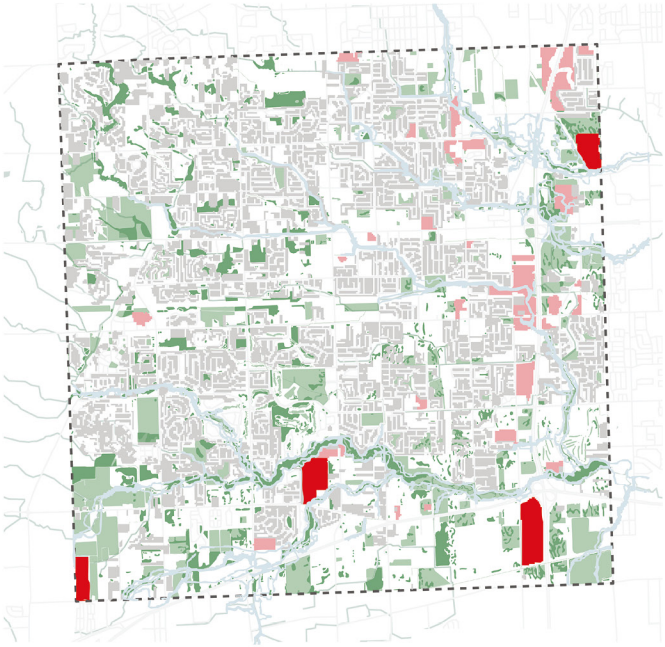
04 Changing Ratios
/ Canton-Westard

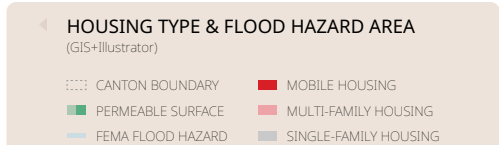
2023, graduate studio project at UM

Duration Oct 2023 - Dec 2023
Instructor Gabriel Cuéllar
Collaborator Akshita Mandhyan
Location Canton, MI, US
Prototype Community Street Strategy

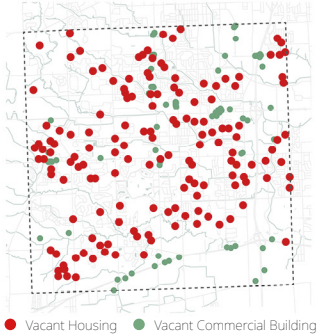
How might the frontier's new role contribute to advancing spatial justice here and beyond?
It's a project rethinking the urbanization in Canton Township in southeast Michigan, one of the fastest growing townships in Michigan. One of the alarming consequences of rapid urbanization is flooding, which is a regional issue affecting nearby townships.

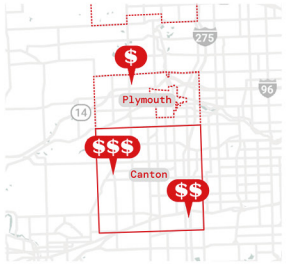
Individual Contribution
diagrams, animations.
We worked together mostly for the research process (GIS data, local news, and reference searching), the final video making (script and recording), and the physical model making. **LINK**

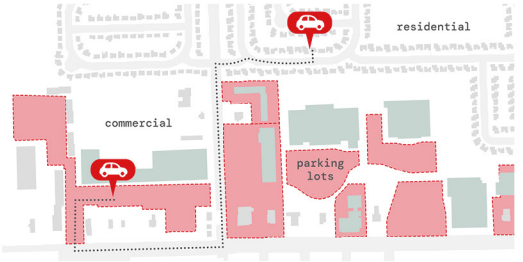




In addition to flooding issue and endless single family housing sprawl,
a) Vacant units (houses, offices and commercial buildings)
b) Housing prices getting more unaffordable
c) Numerous parking lots all over the land,
have also caused the urban inefficiencies which led to the today's state.

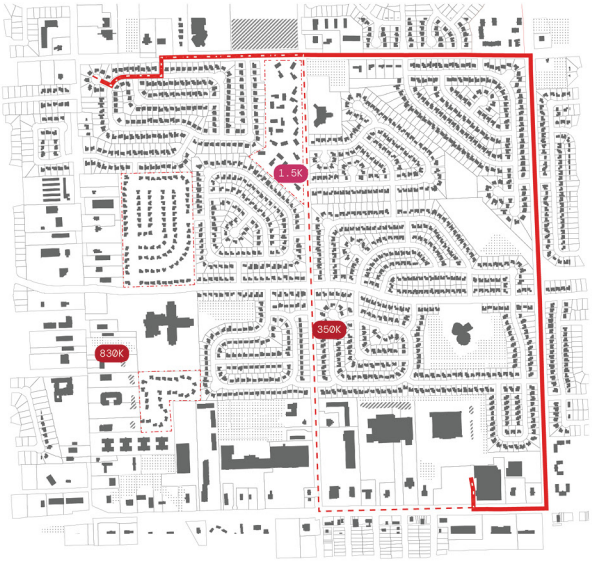




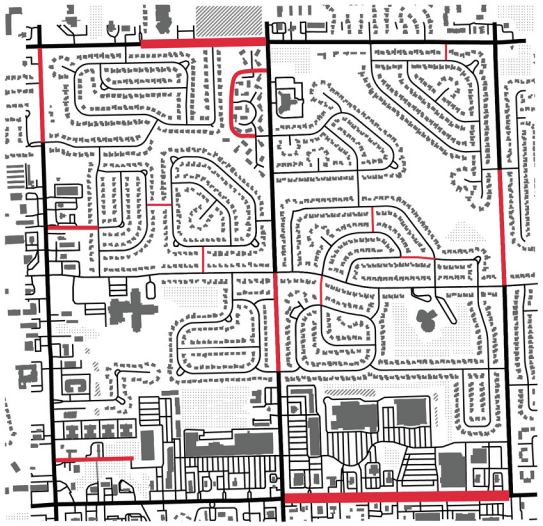




S1) COMMUNITY TRUST
Swapping of land use creates a mixed-use, mixed-economy, walkable environment.
- single family house — **local grocery / cafe**
- vacant buildings — **multifamily affordable houses**



S2) CO-OP
Giving some open permeable land to the community as gardens or other public spaces.
- parcels of single-family homes — **medium rise multi-family homes**



S3) TACTICAL INTERVENTION
Challenging policies catalyzes a more pedestrian friendly urbanization.
- main roads — **annual** festival, concert
- inter-community roads — **monthly** farmer market, exhibition
- intra-community roads — **pop-ups**, community workshop

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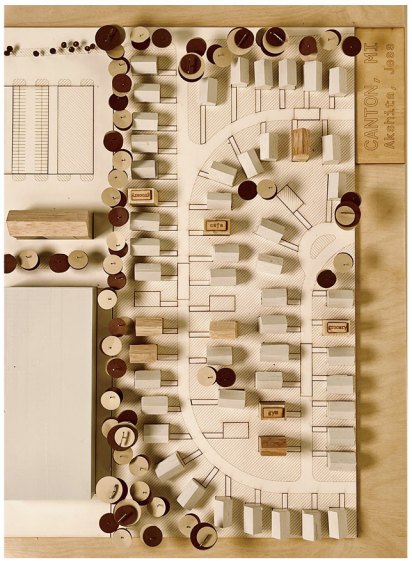
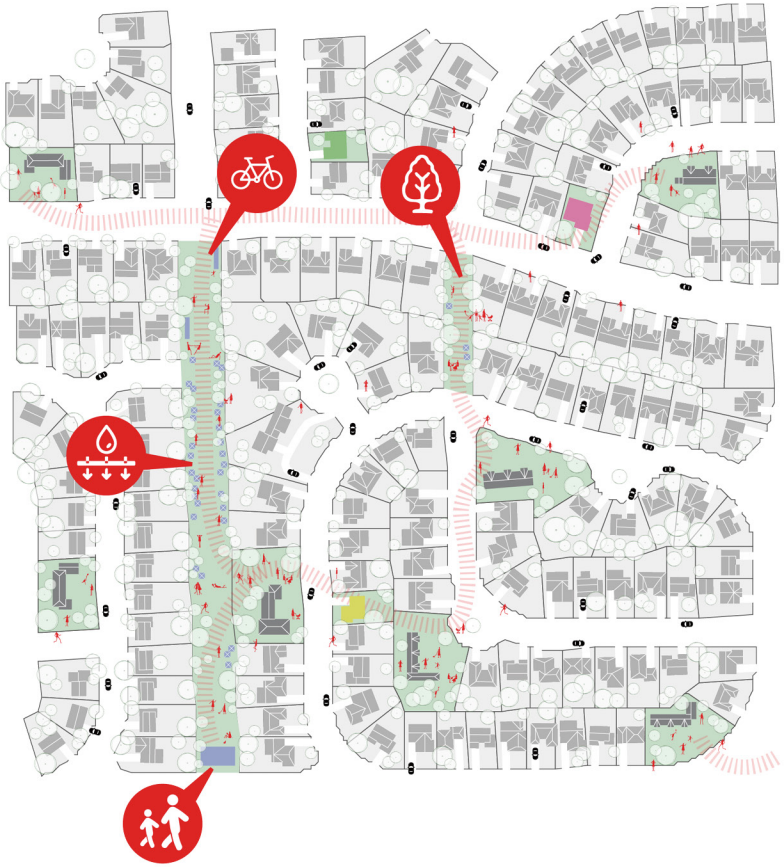
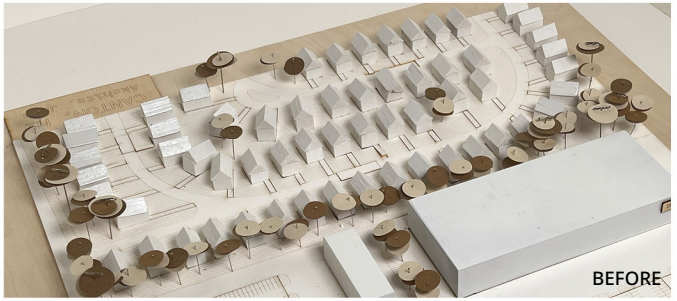
Local Farmer Market Collage (Photoshop)

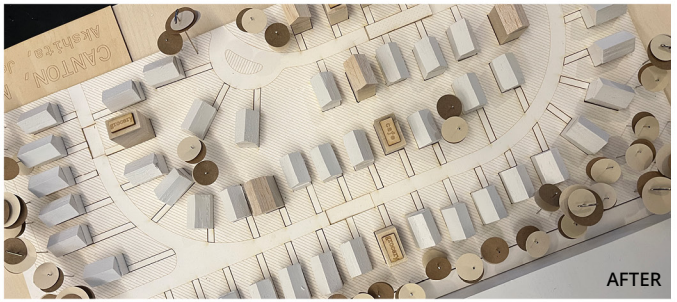
Tactical Strategies (AutoCAD+Illustrator)

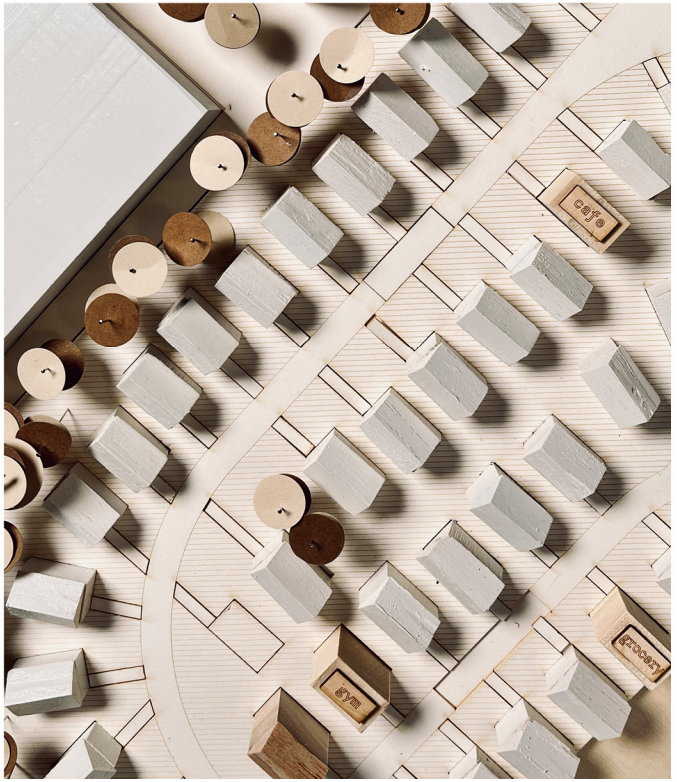
It is more efficient to increase the permeability of land in the city and create a more pedestrian-friendly and inclusive environment.
— to address the notion of justice of people's rights and nature over cars in cities.











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05 NTSEC Renovation

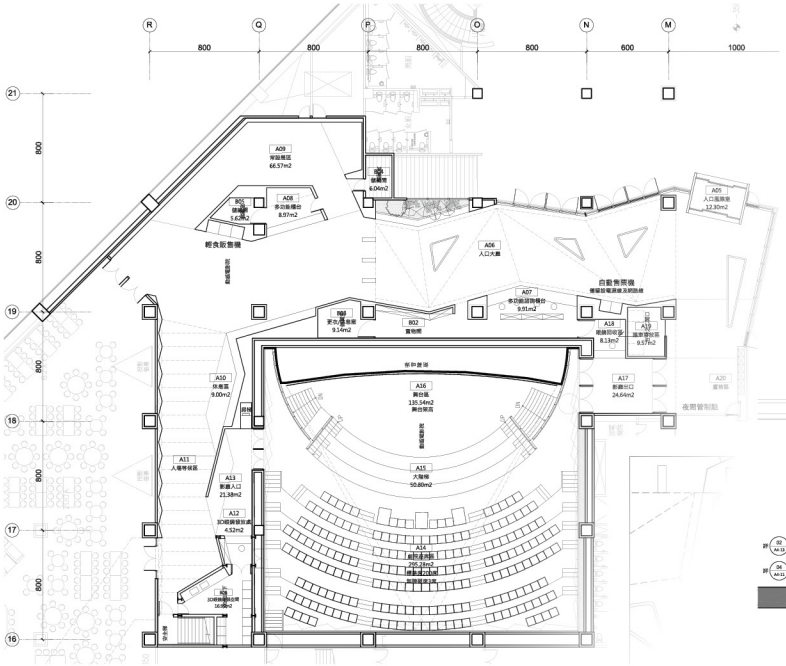
/ B1 Science Theater Renovation

Firm	H.T.S. Associates Architect & Engineers
Duration	2020 - Oct 2025
Collaborator	behet bondzio lin architekten
Location	Taipei, Taiwan
Prototype	Institutional Theater
Status	Under Construction

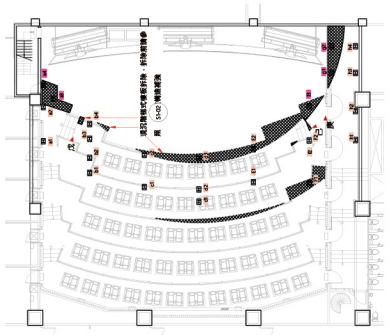
NTSEC is a governmental science and education institution, built in 1956. Much equipment and exhibition halls have to be renovated, including the theater on the basement level.
Collaborating with behet bondzio lin architekten, our architecture firm plays the role of design team and construction supervisor. The project is under construction now.

Participated Time
Aug 2021 - Aug 2022

Individual Contribution
MEP drawings,
site survey,
building codes checking,
application documents,
meeting presentaion



B1 Theater Design Plan (CAD)



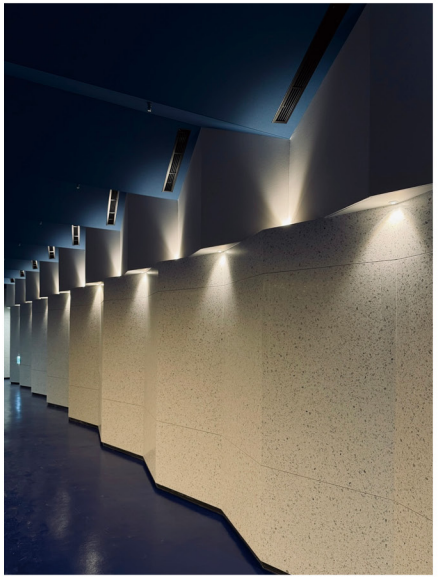
B1 Theater Original Plan (CAD)



B2 Original Strcture Survey



Theater Design Section (CAD)







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06 NTSEC Renovation

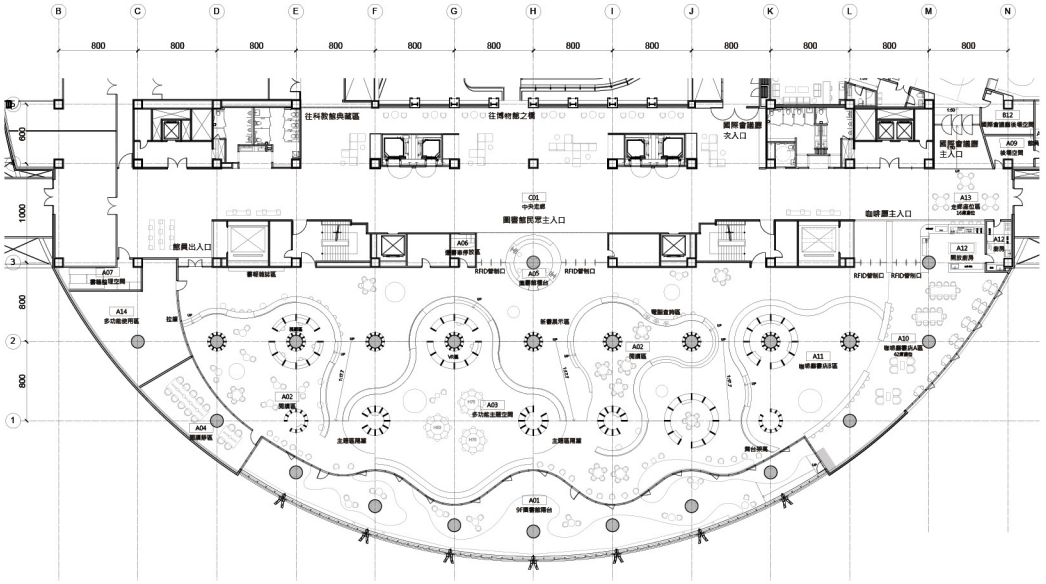
/ 9F Science Resource Center + International Conference Hall

Firm H.T.S. Associates Architect & Engineers
Duration 2020-2028 (estimated)
Collaborator behet bondzio lin architekten
Motif Planning & Design Consultants
Location Taipei, Taiwan
Prototype Library and Conference Hall
Status Under Construction

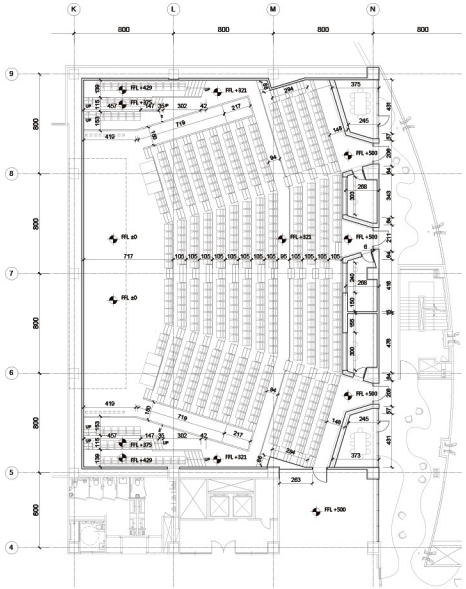
The Science Resource Center (library) on the 9th floor and the International Conference Hall on the 9th and 10th floors are renovated by the collaboration among HTS (design, main documentation, and construction supervisor), behet bondzio lin architekten (design and rendering), and Motif (landscape design).

Participated Time
Aug 2021 - Aug 2022

Individual Contribution
MEP drawings,
site survey,
building codes checking,
application documents,
meeting presentaion



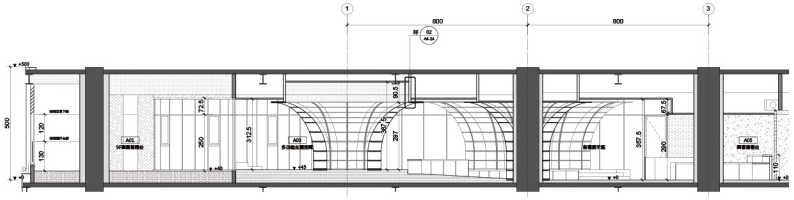
Science Resource Center design plan (CAD)



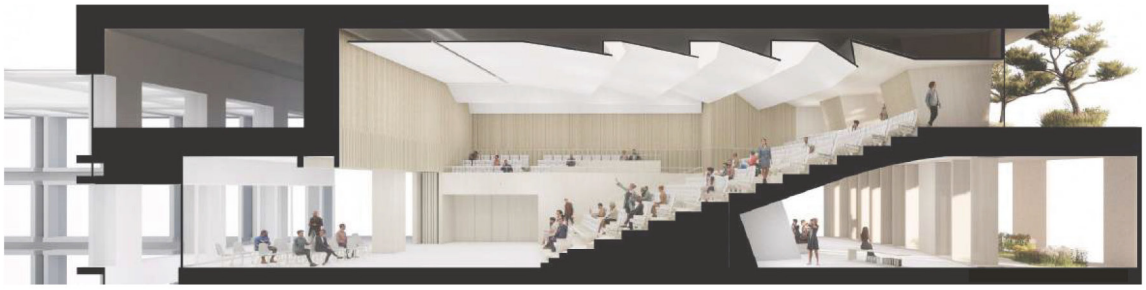
International Conference Hall 10F design plan (CAD)



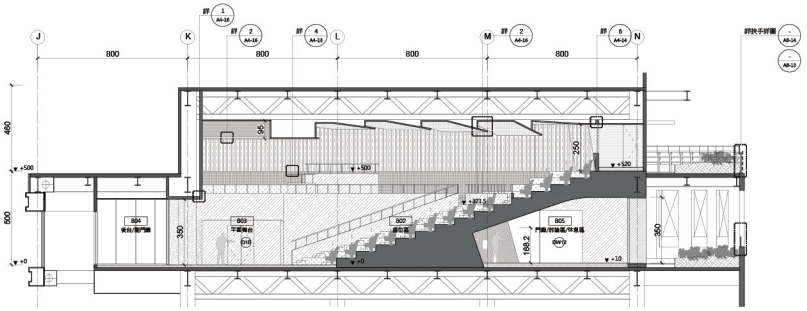
Science Resource Center rendering (Motif Planning & Design Consultants)



Science Resource Center design section (CAD)



International Conference Hall rendering (behet bondzio lin architekten)



International Conference Hall design section (CAD)

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07 Between Alarm and Ease - From Emergenct to Everyday

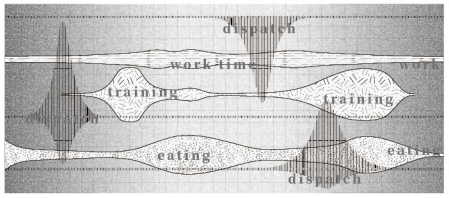
/ A Civic Landscape in Motion and Rest

2019, undergraduate design studio at THU

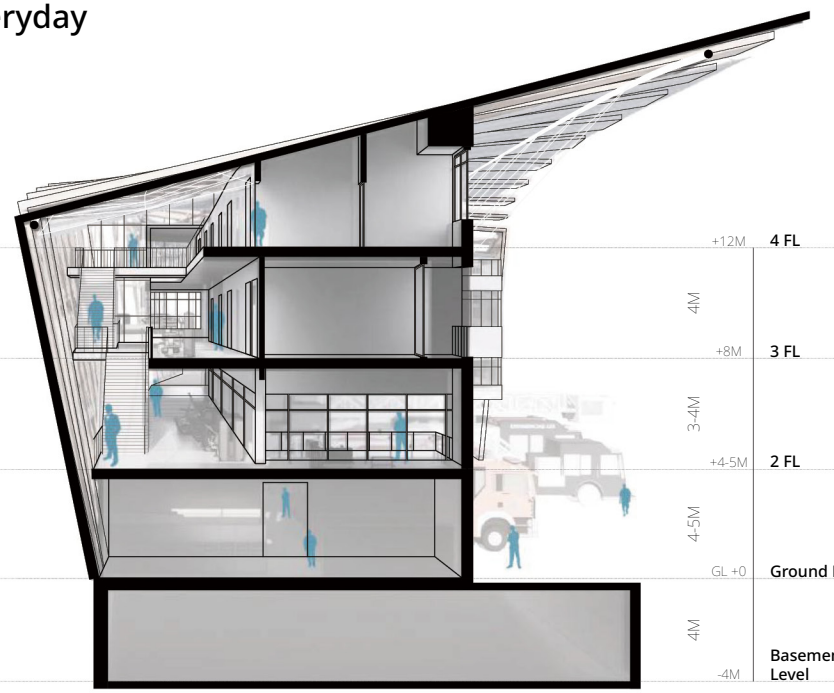
Duration Sep 2019 - Dec 2019
Instructor Yu-Cheng Hong
Location Taichung, Taiwan
Prototype Fire Station

For a fire brigade, a fire station is not only an office but also a training and living space where they can build up their bodies and foster their team spirit. As a living space and office, this service institution should meet the needs of firefighters in both an emergency situation and a peaceful resting place at the same time.

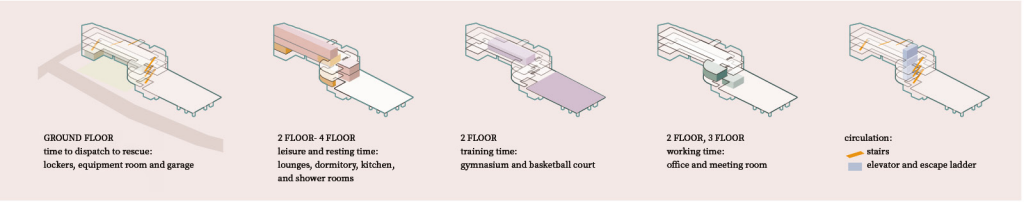




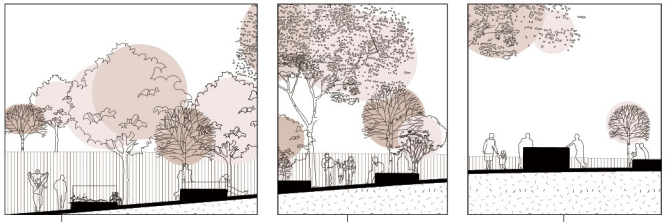




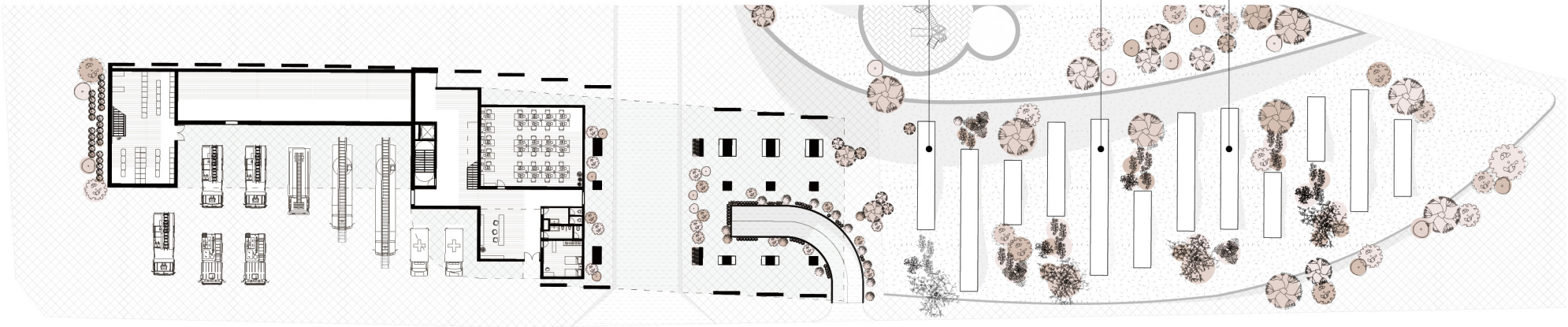
(Rhino, Enscape, PS)



A mild slope in the park gives trainers a better and more challenging jogging track and also a playful area for kids. Indicating the CLT roof/façade and wood benches in a different height array in order on the mild slope, which people can adapt every posture to.



Ground Floor Plan (CAD, Illustrator)



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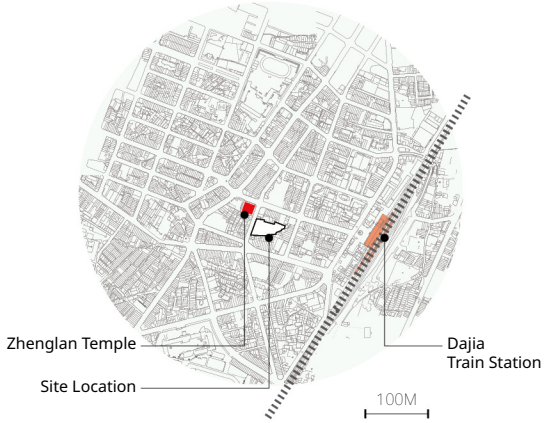
08 Dajia Impressionism

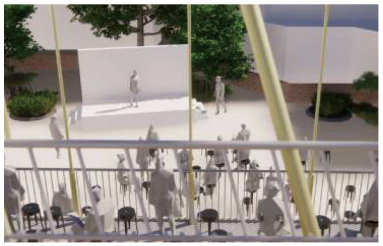
/ Regrowth of the Coast Line Rail Station

2018, undergraduate design studio at THU

Duration Sep 2018 - Dec 2018
Instructor Hsiu-Chuan Yang
Location Taichung, Taiwan
Prototype Community Path + Public Plaza

Dajia is famous as the town of Mazu, the Chinese Buddhist goddess of the ocean, and the biggest temple of Mazu, Zhenlan Temple, is a popular attraction. However, the Dajia Railway Station is one of the coastline railway stations that decayed since the economy declined due to the close of the harbor nearby.
The development of the village is based on the three activities of **religion, residence, and recreation**, and none of them is dispensable.







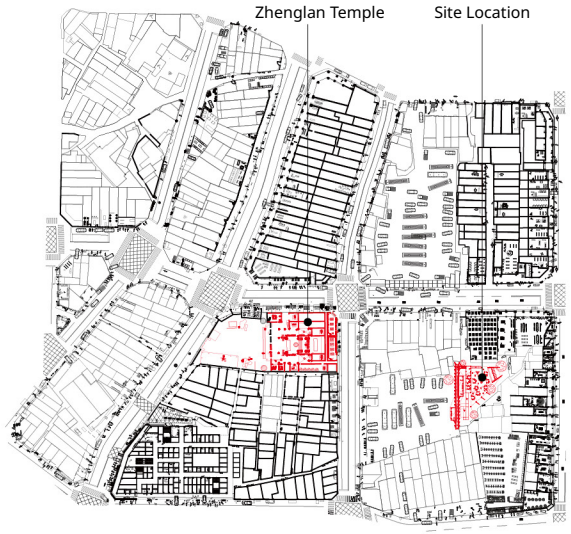
Residential purpose:
local rally of elections



Recreational purpose:
local markets and fairs



Religious purpose:
resting area for pilgrims



Vendors, tourists, and pilgrims gather around, and lots of activities are happening along the roads nearby Mazu Temple. (CAD, Rhino, Enscape)

Designed on the backside of a parking lot surrounded by living houses, the bridge is a huge observation deck symbolizing a gate of the public plaza, which makes a combination of three activities in this vacuum and negative space in the village context.



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09 Telling Place!

Marks, Signs and Echoes to Share Our Stories

/ Community Engagement in Grixdale Farms, Detroit

Duration May 2025 - May 2026 (estimated)
Collaborators Grixdale Farms Residents Association, María Arquero de Alarcón, Lisa DuRussel, Paul Draus, Dominic Gomez, Francesca Badalamenti, Kathryn Arnold
Location Grixdale Farms, Detroit
Project Community Engagement

This project builds on an ongoing community-academic collaboration and seeks to build local capacity and mutual learning opportunities. Through storytelling and co-design sessions, participants will share and collect stories, co-creating signs that capture the multicultural composition of the Grixdale Farms neighborhood and tell their [hi]stories, thereby enhancing residents' sense of place and collective ownership.

Sponsors
UM Engage Detroit Workshop
UM-Dearborn Office of Community Engaged Learning Grants

Individual Contribution
Mapping, data collection, data visualization, site visit, interviews, online StoryMap, vendor contact.

LINK to the StoryMap



COLLECTING themes and quotes from interviews



CO-DESIGN signs and markers during workshops



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10 Peripheral Centralities

/ Community Engagement in São Paulo

2024, graduate public design corp course at UM

Duration May 2024 - Sep 2024
(fieldwork in São Paulo May 24 to June 11)
Instructor María Arquero de Alarcón
Collaborators Md Ehsan Alam, Tabita Aitonean, Natalia Boldt, Stephanie Dutan, Aaron Johnson, Yi-Chien Kuo, Yesha Madhubhai Malaviya, Akshita Mandhyan, Jasmine Paulk, Angie Perez, Mariam Reyes-Toidze, Chun Wang (Sheila)
Location São Paulo, Brazil
Project Community Engagement

Peripheral Centralities investigates the anticipated impacts of the Jurubatuba Arch Urban Intervention Project (PIU-ACJ) on the transformation of the south zone of São Paulo City.
Working with our local partners, students in this Public Design Corps section engaged in the co-production of maps (and counter maps) and the documentation of sites and local narratives supporting community efforts to secure the right to housing and minimize displacement of vulnerable populations across the PIU-ACJ.

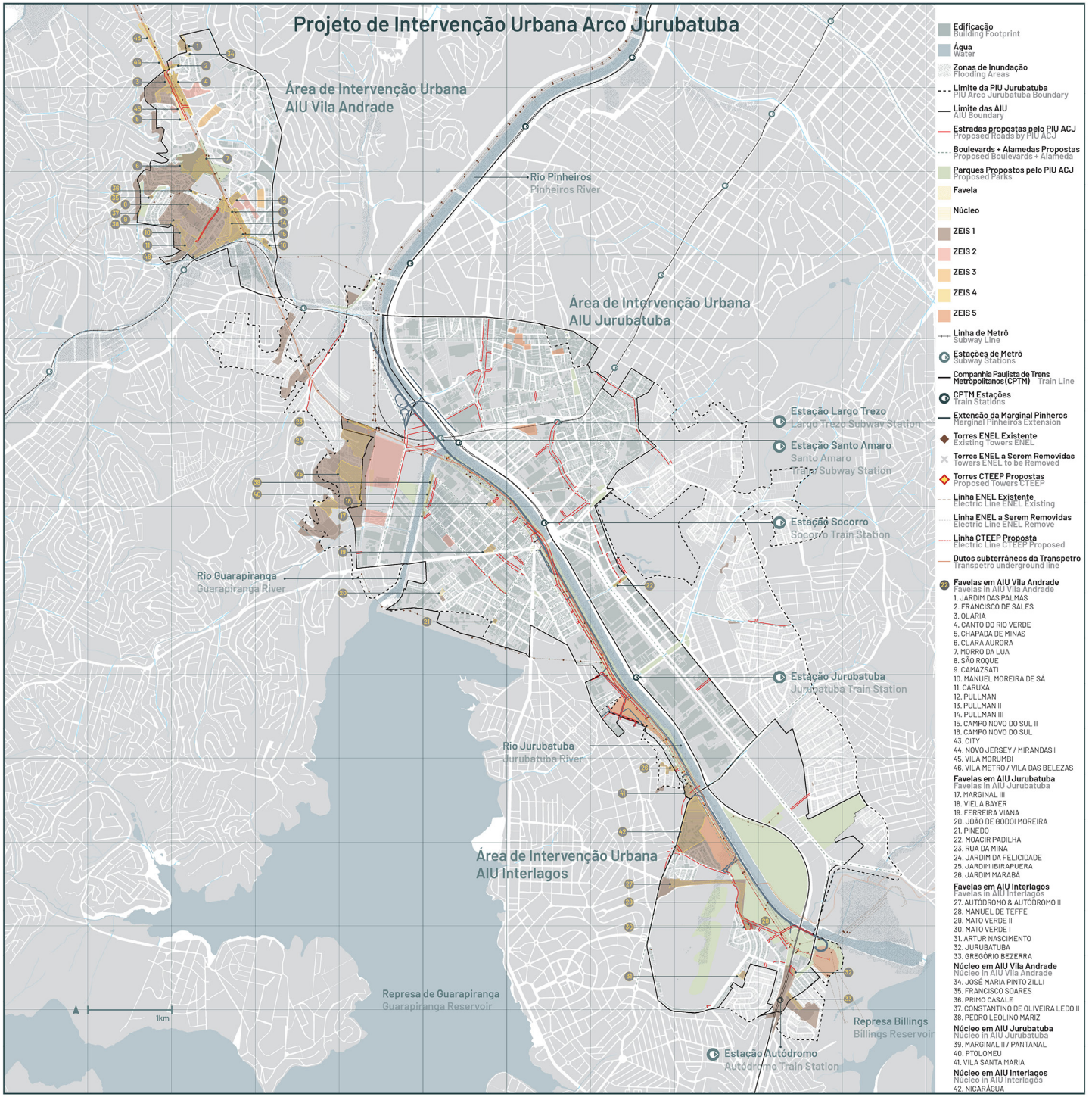
Individual Contribution
site survey, large map on the right side (GIS+Illustrator), intro video making, encontro vedio making LINK, photographing and recording






During the event, professional people provided solutions and ongoing issues, and residents shared their struggles and made up their manifestos.

Open platform: LINK Website: LINK



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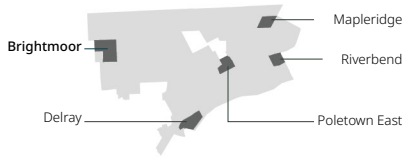
11 The Disaggregated City:

The Afterlife of Leftover Spaces in Deindustrializing Detroit

/ Book Proposal in Five Detroit Neighborhoods

Duration	2020 - present
Collaborators	Martin Murray, María Arquero de Alarcón, Olaia Chivite Amigo
Five Neighborhoods	Brightmoor, Delray, Poletown East, Riverbend, Mapleridge
Project	Book Proposal
Participated Time	March 2025 - present
Individual Contribution	Site visit, data collection, mapping, data visualization.

This project examines Detroit's inner-city transformation marked by abandonment, disinvestment, and shrinking public services. Following decades of deindustrialization and economic instability, Detroit exemplifies a "POST-URBAN CITY" shaped by global capitalism. The research explores how historical forces produced lasting decline, how NGOs and grassroots groups filled service gaps, and how communities repurpose vacant land beyond conventional governance.





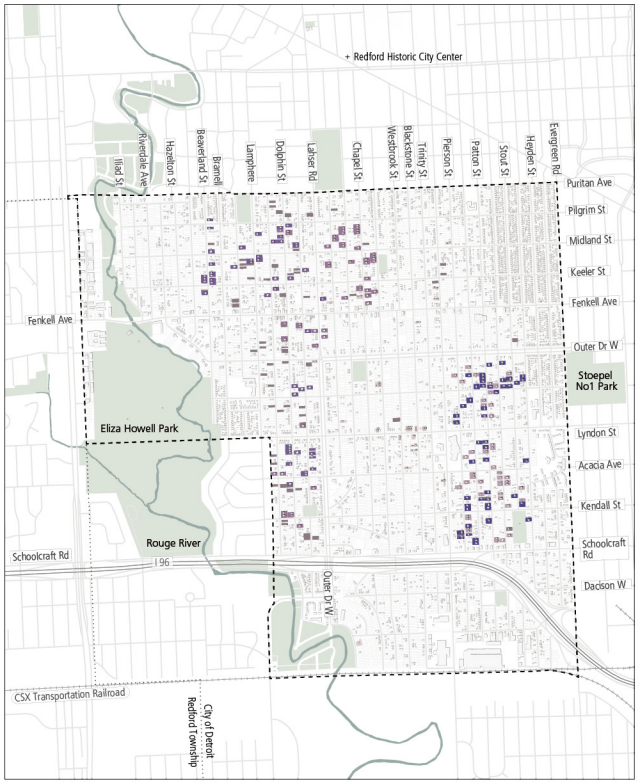
FROM "HILLBILLY HEAVEN" TO "BLIGHTMORE" AND THE LOW-INCOME HOUSING TRAP

Today, Brightmoor faces staggering vacancy, with over half its land now empty lots. The Detroit Land Bank Authority (DLBA) controls many abandoned parcels, while speculative ownership, predatory landlords, and failed "rent-to-own" schemes destabilize residents further.

Despite these challenges, philanthropic organizations and grassroots groups have stepped in to fill gaps left by retreating municipal services, while residents organize for safety and revitalization.

In 2017 and 2022, Detroit Water and Sewer Department (DWSD) unveiled Green infrastructure proposals, the Brightmoor Stormwater Improvement Project and bio-retention ponds, aiming to address flooding and create new landscapes.

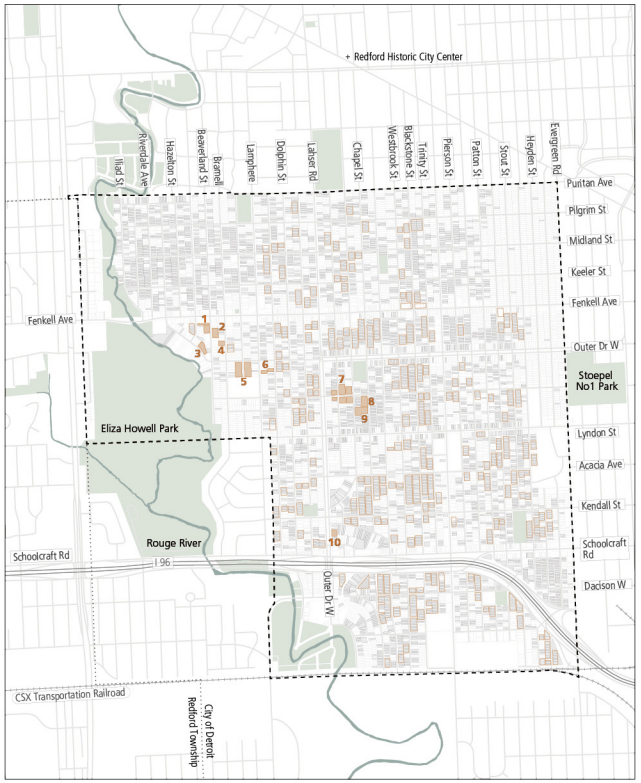
The conflicting visions of resilient "Green Infrastructure" represent the tensions between top-down infrastructure projects and bottom-up community efforts. Yet, these approaches illustrate competing visions of how Brightmoor's future might be reimagined.



NDND Brightmoor Homes Map

2,000 ft

- Brightmoor Perimeter
- Detroit & Redford Twp Boundary
- Buildings
- Parcels
- Rouge River
- Public Parks
- Brightmoor Homes I
- Brightmoor Homes II
- Brightmoor Homes III
- Brightmoor Homes IV
- Brightmoor Rental Homes
- NDND's Parcels

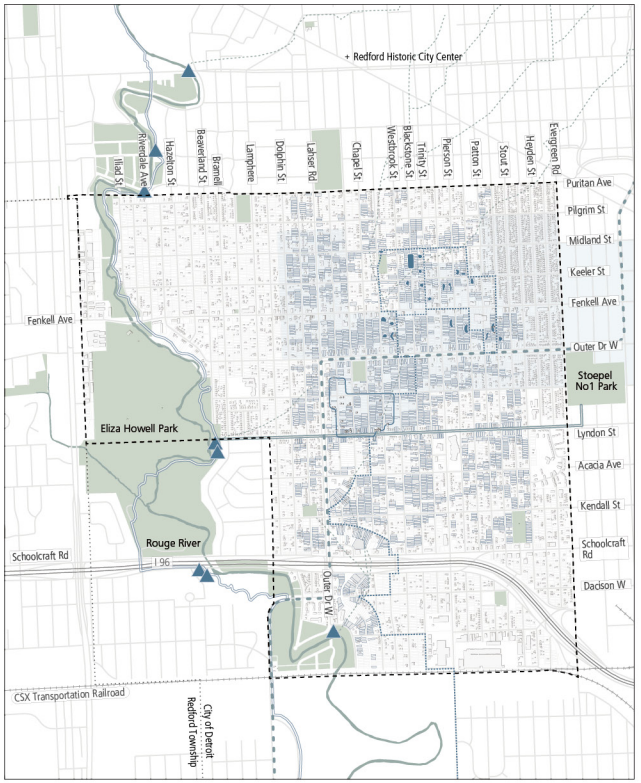


Existing & Proposed Farmsteads Map

2,000 ft

- Brightmoor Perimeter
- Detroit & Redford Twp Boundary
- DLBA's Parcels
- Rouge River
- Public Parks
- Potential Farmsteads in Brightmoor Farmstead Incubator Project
- Existing Urban Farms and Pollinator Gardens

1. Brightmoor Artisans Collective Learning Garden
2. Beaverland Farms
3. Brightmoor Community Greenhouse NBB
4. Rooney, Brittney
5. Cross Pollination Corridor Project
6. Youth Grow Brightmoor Garden Hickey, Hickey, Hickey Living et al
7. Greydale Farms Bradd, Brittany R.(to relocate)
8. Seedfolx Farm (to relocate)
9. Morgan-Sterenberg, CHAD (to relocate)
10. Pollinator Habitat Detroit Hives INC



Proposed Green Stormwater Infrastructure Map

2,000 ft

- Brightmoor Perimeter
- Detroit & Redford Twp Boundary
- Buildings
- Parcels
- DLBA's Parcels Hold for DWSD
- Rouge River
- Ghost Streams
- Public Parks
- Fenkell Stormwater Project 20 bioretention cells + urban forest
- Brightmoor Stormwater Improvement Infrastructure Project
- Proposed GSI Affected Area
- Green Infrastructure Connection
- Comined Sewer Overflows Outfalls
- Proposed Greenway on Wayne County Road
- Lyndon Street Greenway
- Rouge River Greenway

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12 Dearborn Industrial Greenbelt

/ Nature Based Solutions Feasibility Study

Duration	2024
Collaborators	Kathy Velikov, María Arquero del Alarcón, Lisa DuRussel, Curt Wolf, Richard Hua, Chengdai Yang, Teresa Zbiciak
Location	Dearborn, Detroit
Project	Solutions Study
Participated Time	Aug - Dec 2024
Individual Contribution	Data collection, mapping, data visualization.

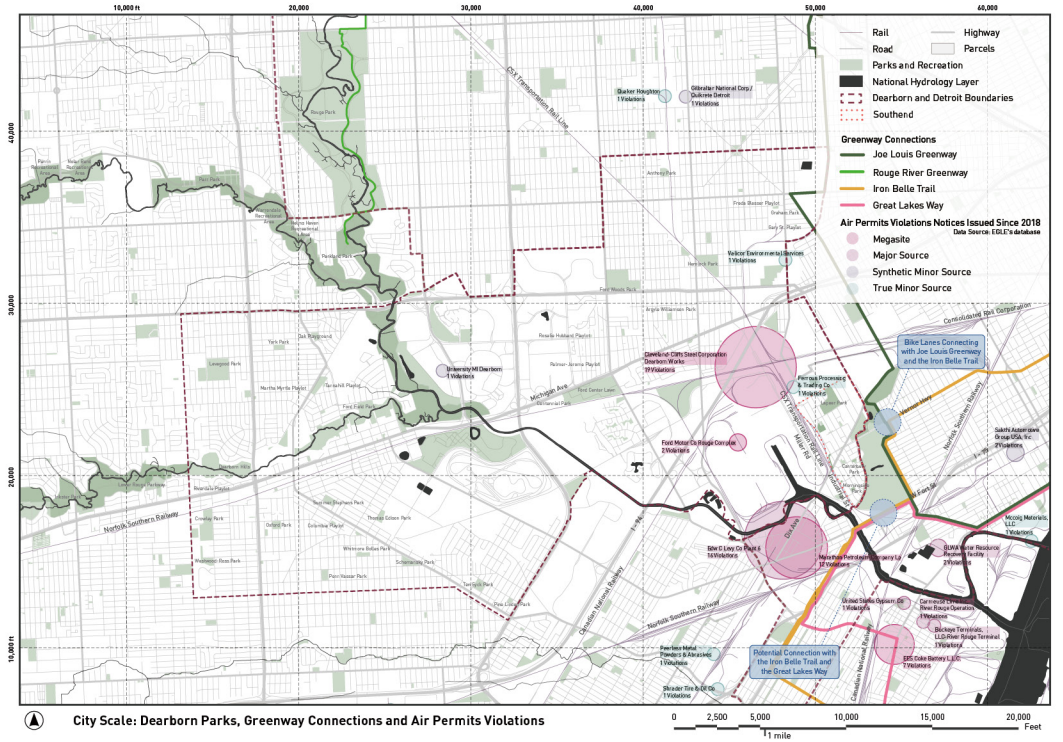
The Dearborn Industrial Greenbelt Project aims to evaluate the feasibility, impact, and strategies for implementing Nature-based Solutions (NBS) in the Southend neighborhood, an area heavily affected by air and noise pollution from nearby industries, rail lines, and truck routes.

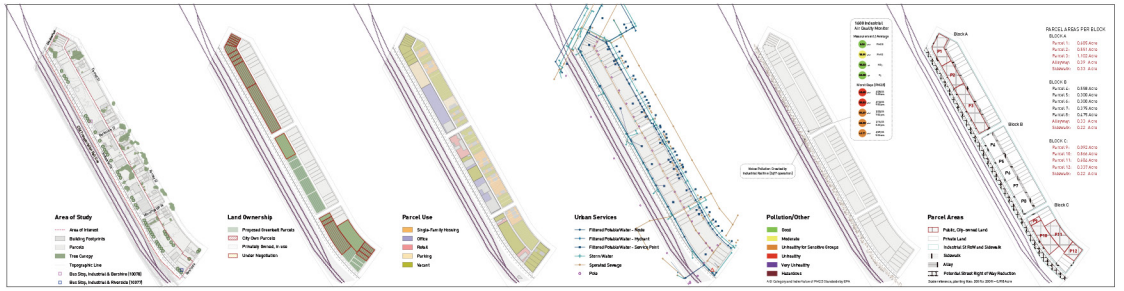
By introducing a multi-functional vegetated buffer, the project seeks to mitigate flooding, reduce noise, improve public health, and provide ecological, social, and economic co-benefits, envisioning a more balanced coexistence of industrial and residential land uses.

To advance this vision, the study focuses on city-owned parcels along Industrial Street, assessing phased implementation strategies and pilot projects. Methods include property acquisition, traffic calming studies, and feasibility analysis for integrating NBS. The project emphasizes co-design with community and stakeholders, while also identifying pathways for funding and long-term resilience.

Through these approaches, the Greenbelt seeks to deliver practical solutions that combine environmental restoration with neighborhood revitalization.







▲ Southend Greenbelt: Area of Interest (ArcGIS, Illustrator)

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