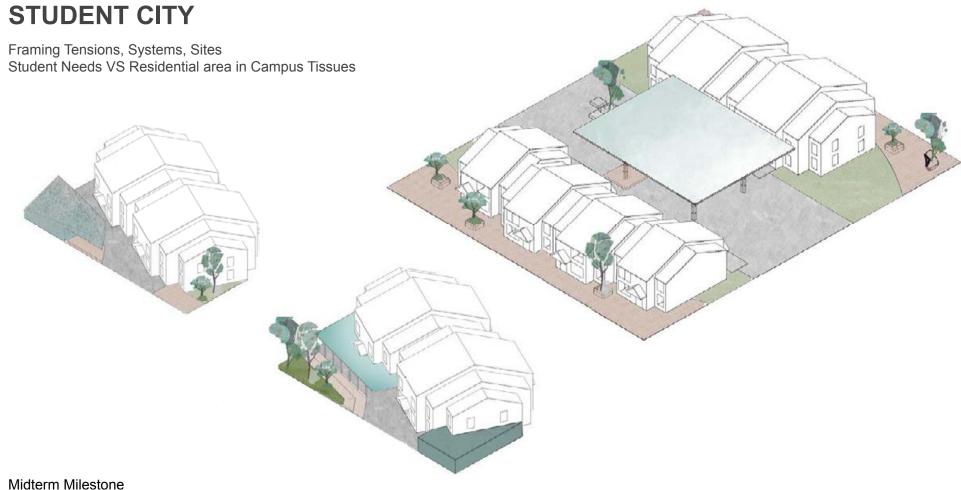
University of Michigan Taubman College of Architecture and Urban Planning

Master of Urban Design Fall 2025 semester: Strictly Infrastructural

Ann Arbor City Planning Commission December 9, 2025

Instructor: Gabriel Cuéllar gcuellar@umich.edu

Students: Mahleej Gola, Yin-Tuan Hsueh, Carolyn Larsen, Tianchang Li, Palvi Ramani, Dhvanil Pithava, Minza Shahid Strictly Infrastructural



Midterm Milestone
Yin-Tuan Hsueh, Tianchang Li

Framing Systems

High percent of student population

Chart Population Trend, Ann Arbor and University of Michigan

source: U.S. Census 1860-2020, University of Michigan Enrollment Reports

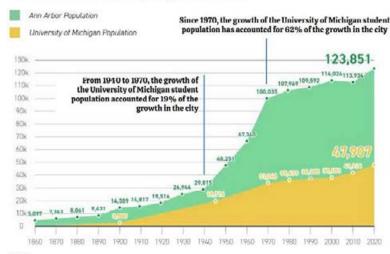


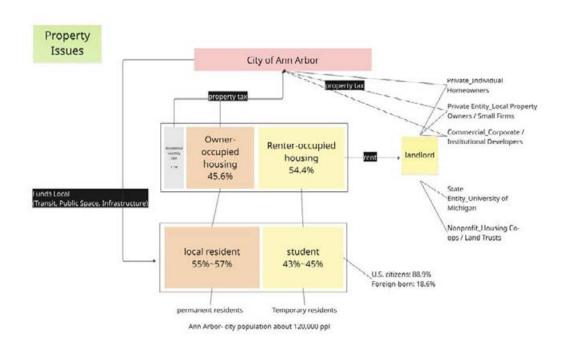
Table University of Michigan Enrollment Statistics (2015-2024)

source: University of Michigan Enrollment Reports

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
U-M ervolment	43652	44715	46002	46716	48090	47,907	50,278	51,225	52,065	52,655

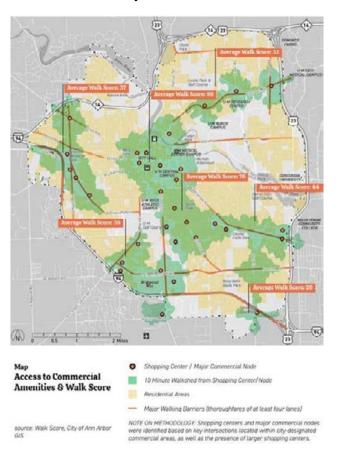
Over the last 10 years, U-M enrollment has increased an average of over 1,000 students each year, with a record number of applications for Fall 2025.

Property issues between this tension

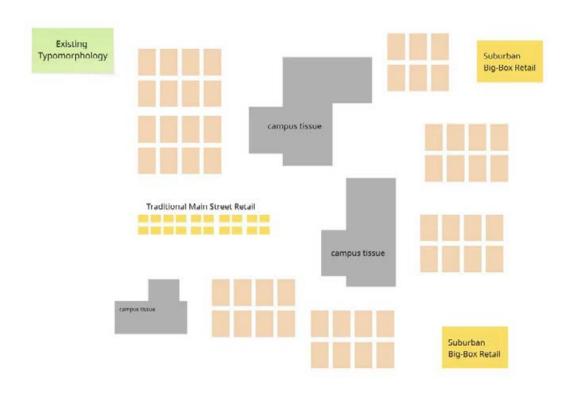


Framing Systems

Retail accessibility



Existing typomorphology in AA



Framing Systems

Campus Tissues

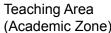
"The Anatomy of Sprawl" by "Scheer, Brenda Case"

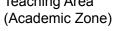
Three Suburban Tissues

- -Static tissues.
- -Elastic tissues
- -Campus tissues.

Significant areas of the developed suburb are composed of larger tracts of land owned by single entities and developed with multiple buildings.

A spatial fabric centered on the school's teaching area, around which student housing and supporting businesses are organized.















Framing Tensions

Tension:

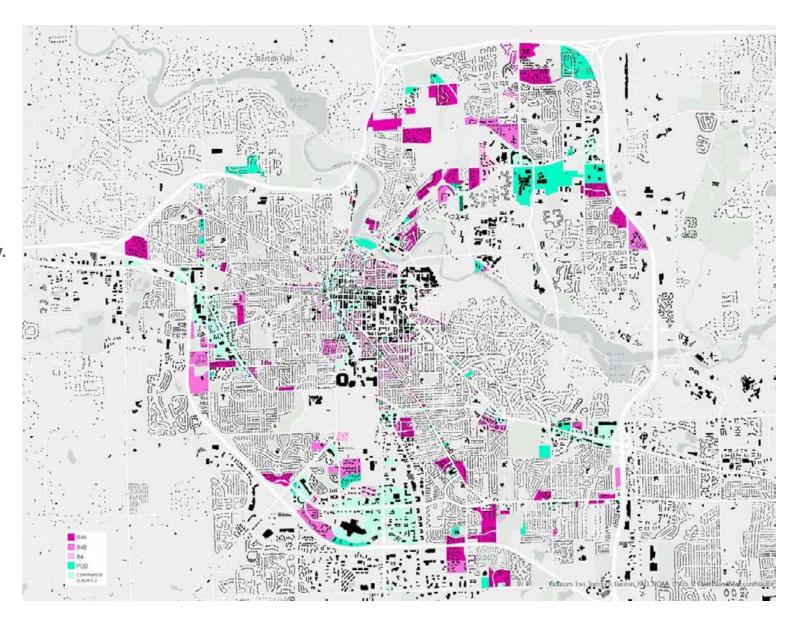
Mobility constraints confine students within the mono-functional campus tissue, exposing a fractured relationship between campus and city.



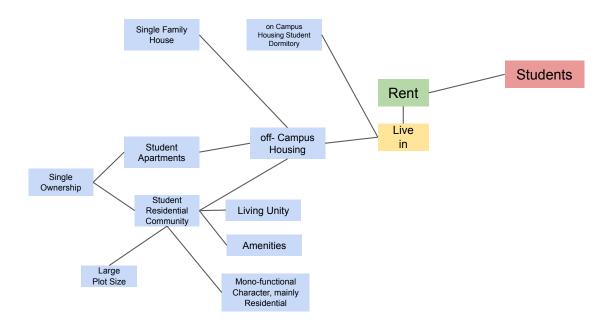
Framing Tensions

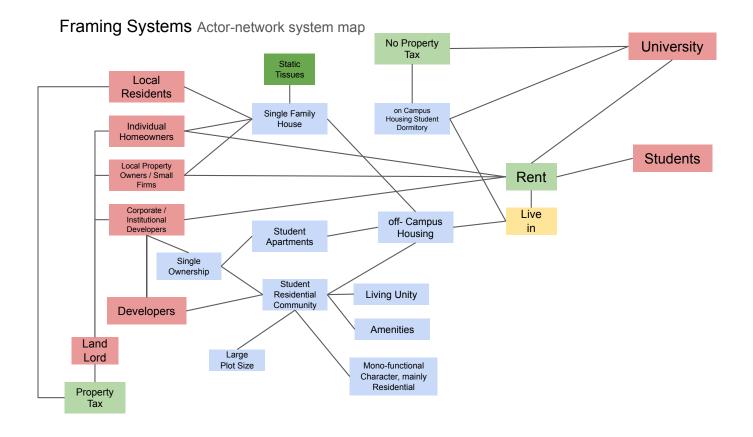
Tension:

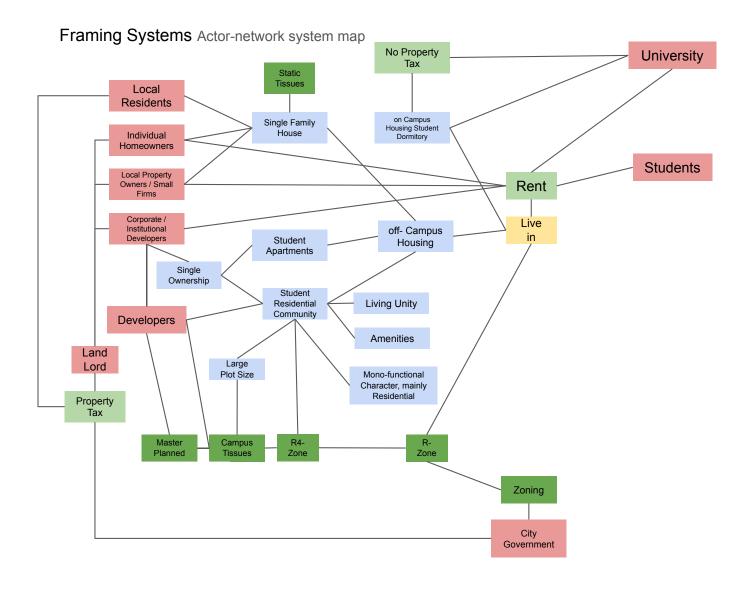
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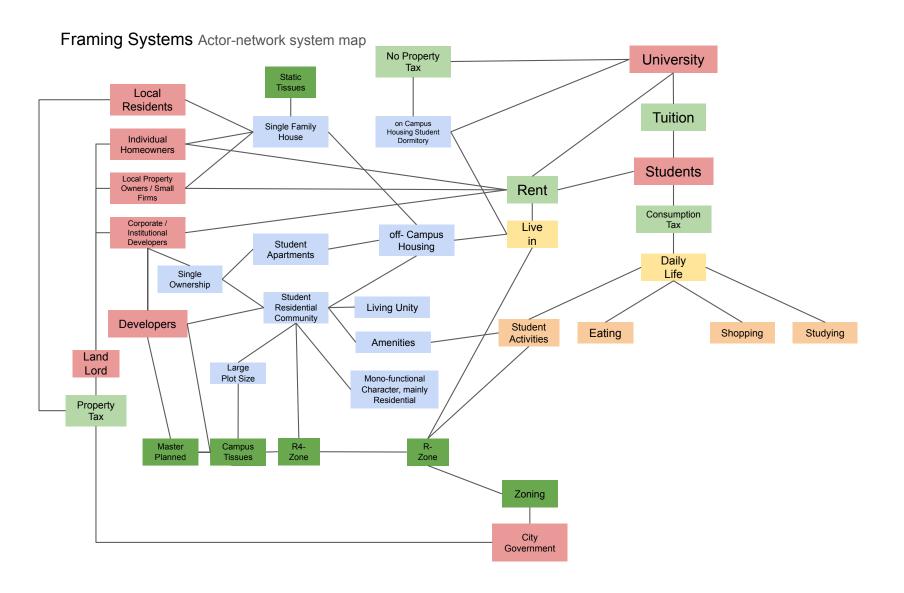


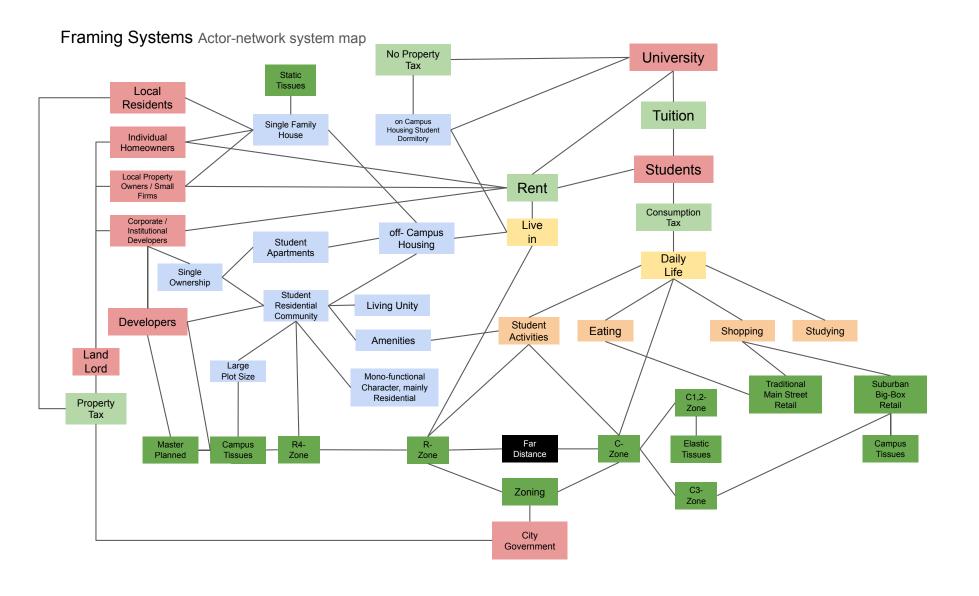
Framing Systems Actor-network system map

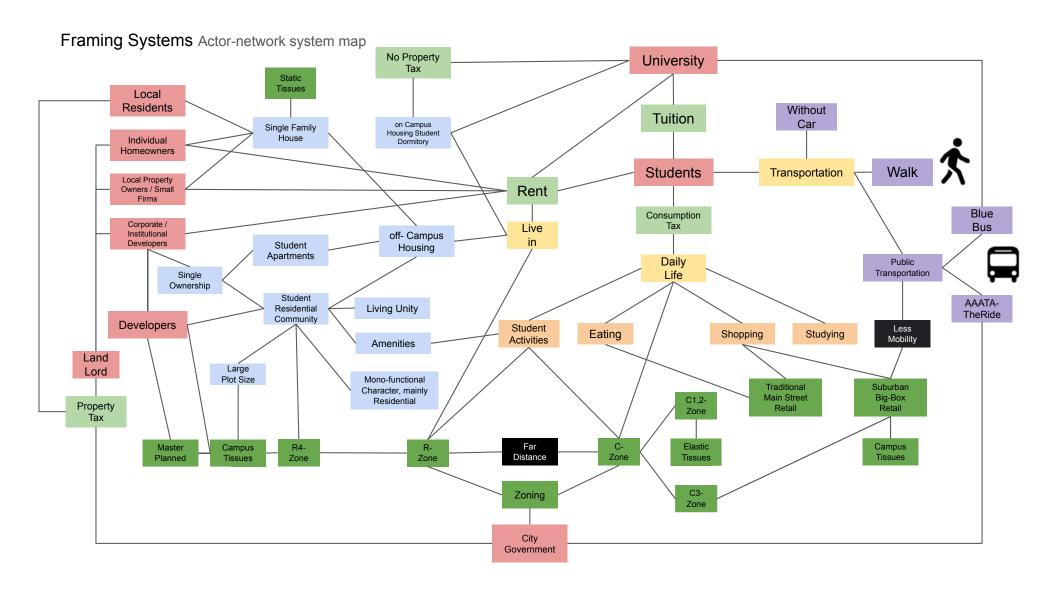






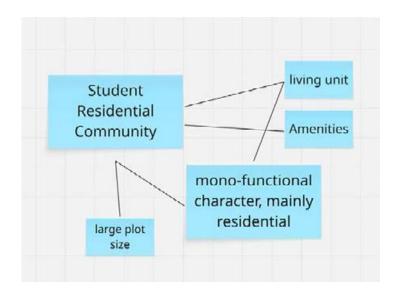






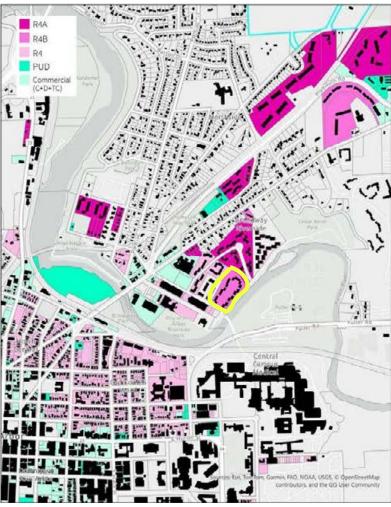
Campus Tissues_R4A_Community in Ann Arbor







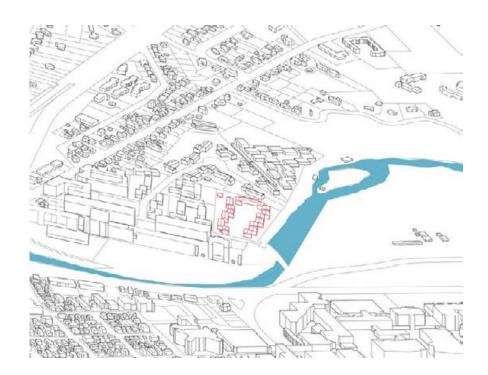




SITE1-The Villas of Northstar (Student Residential Community)



SITE 2-Island Drive (Student Residential Community)



SITE1-The Villas of Northstar (Student Residential Community)







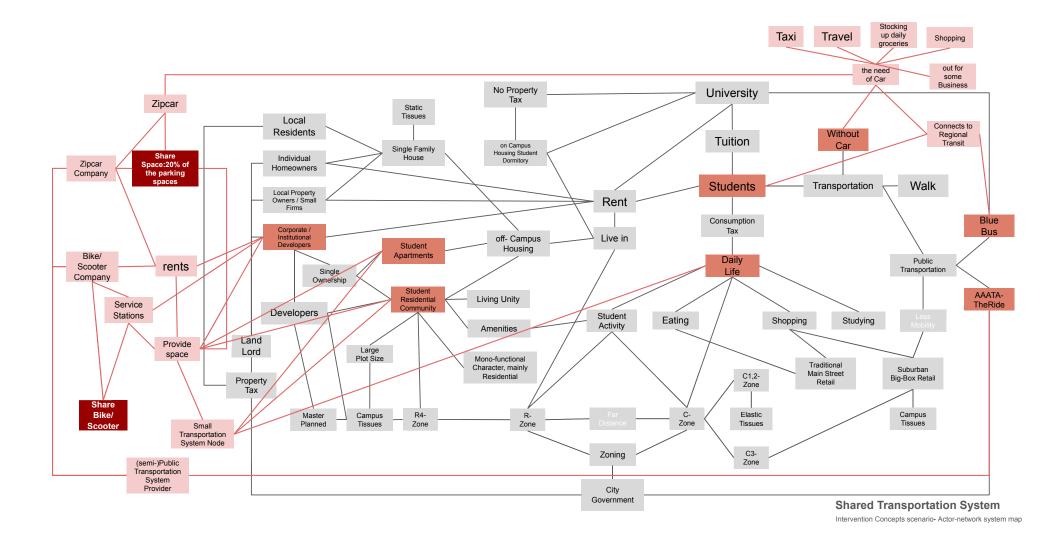
Intervention Concepts:

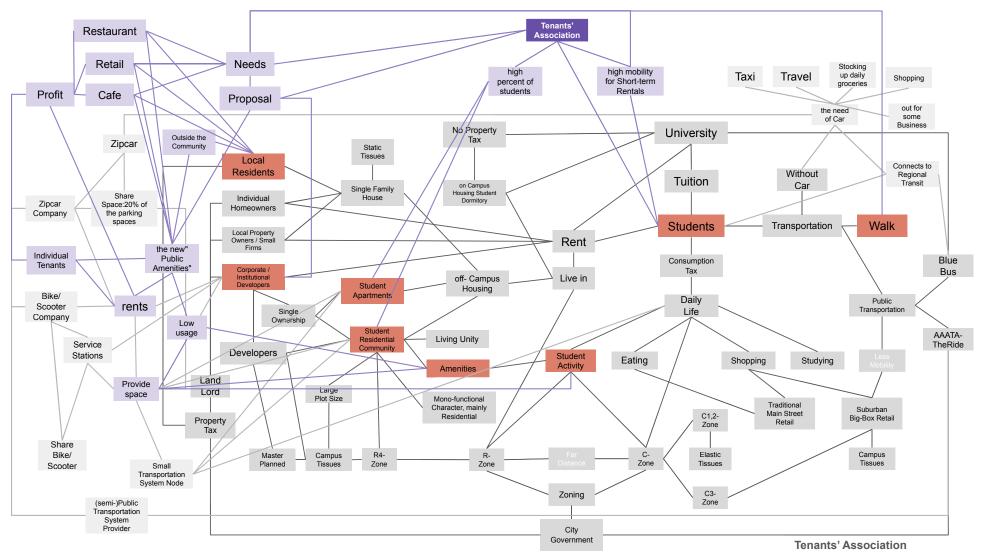
Shared Transportation System

+ Tenants' Association

+ Zoning change: PUD

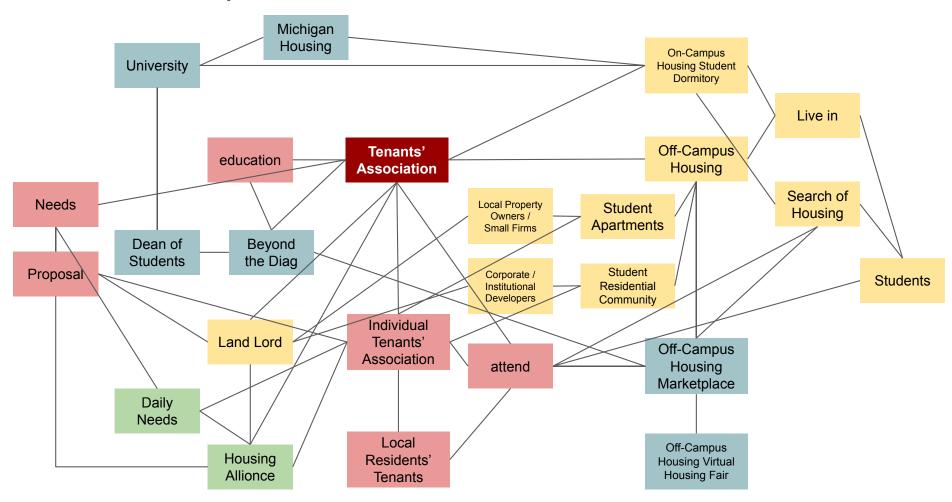


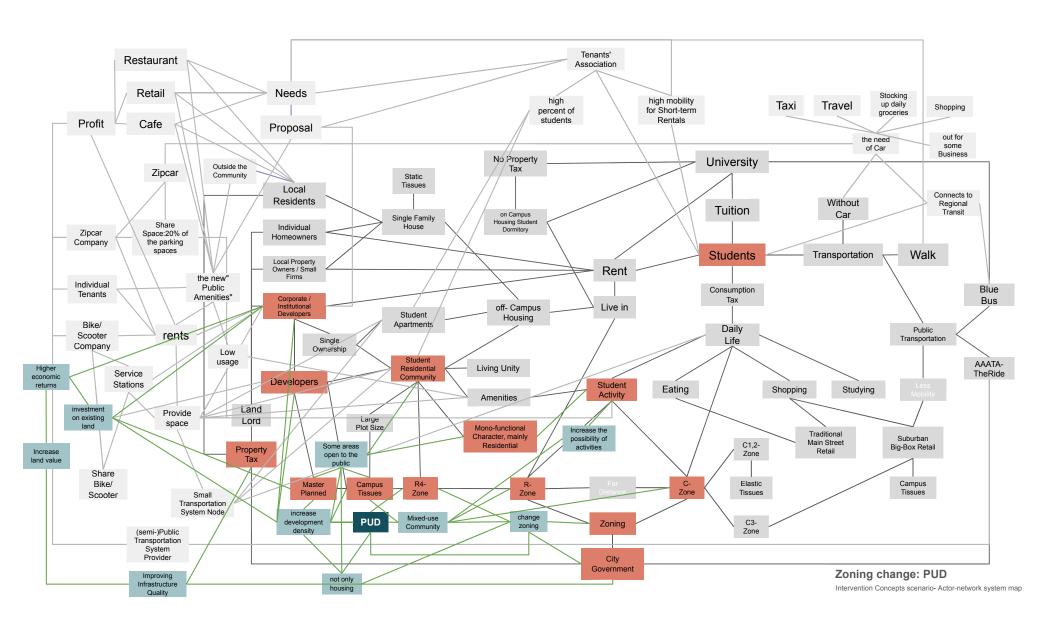


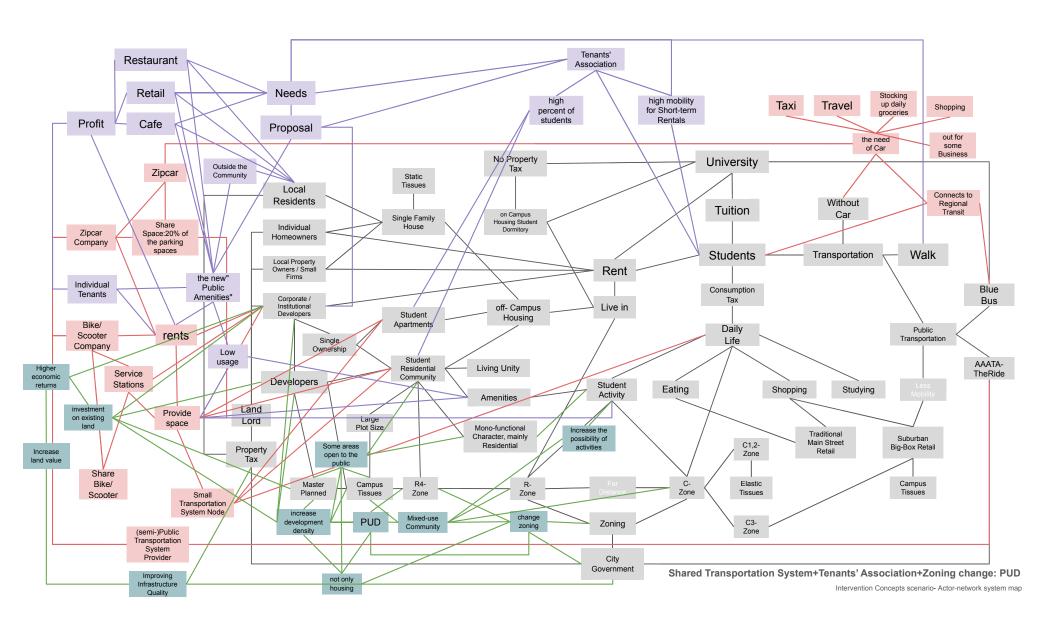


Intervention Concepts:

Tenants' Association Implement Plan



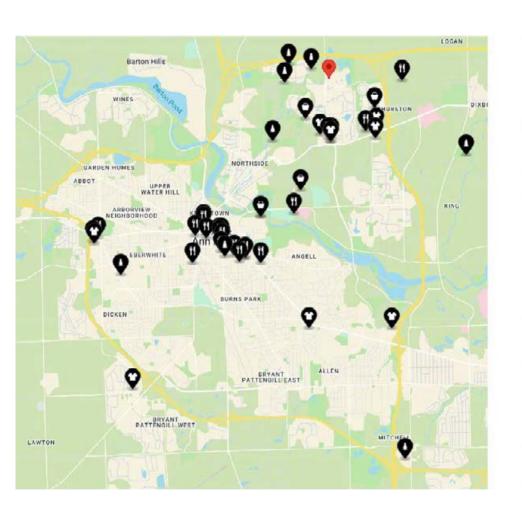


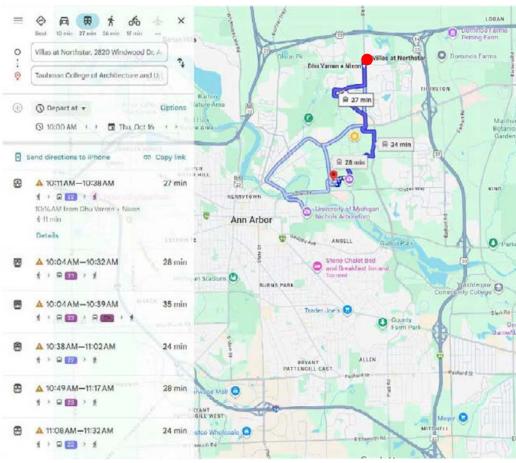


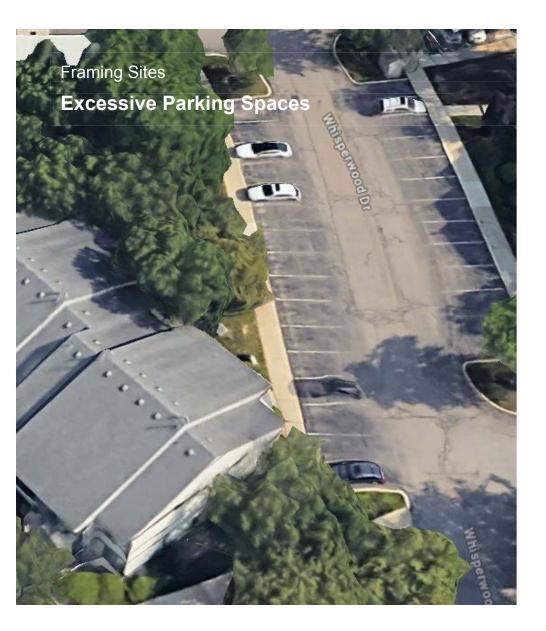


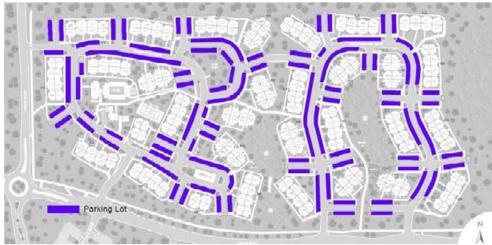


Suburban Location

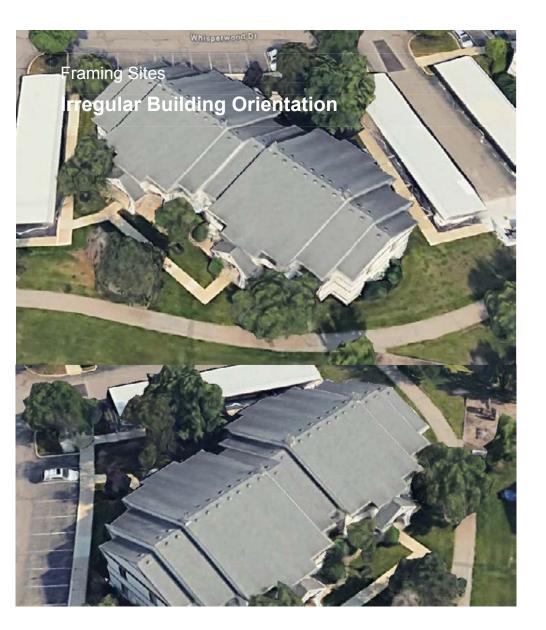






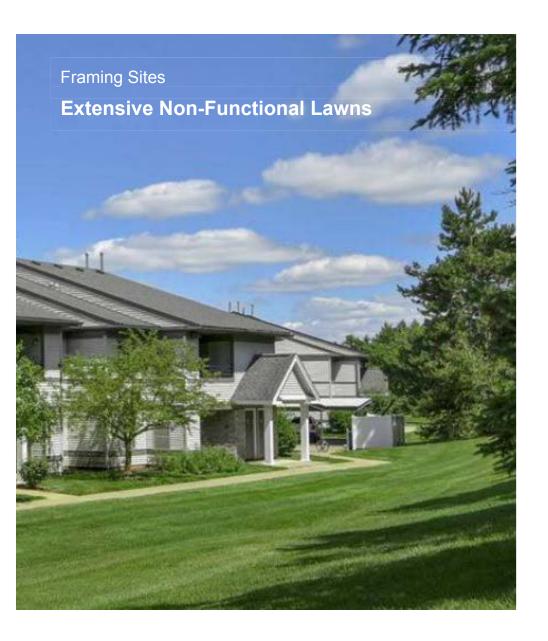








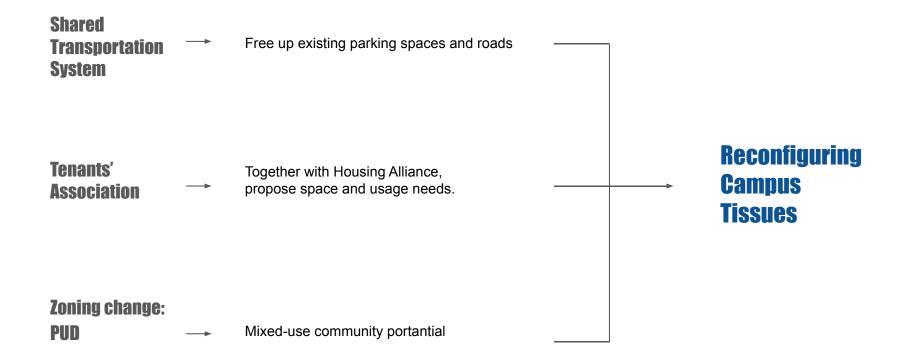








From Intervention Concepts to Spatial Framework

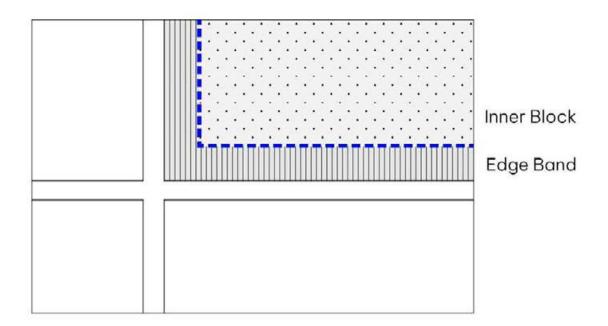


Spatial Framework

Design Strategies- by Edge and inner block

Inner Block:
Couple the Buildings
Generate shared public spaces and insert communal structures.

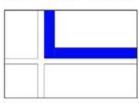
Edge Band: Mixed-use perimeter blocks creating active community streets.



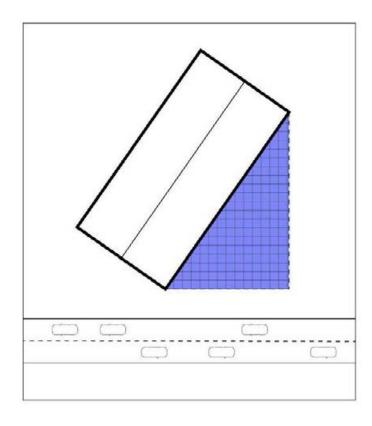
Spatial Framework

Design Strategies- by Edge and inner block

The Edge Band

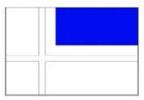


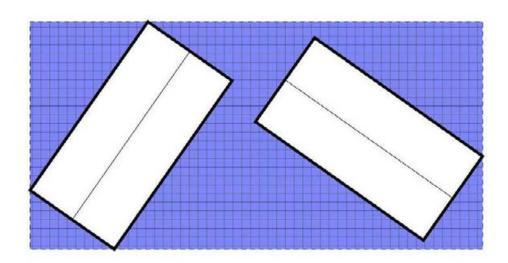
By framing the existing building's orientation with the street, a diverse commercial strip is created along the street, forming a relatively square street-facing interface to invite pedestrian.



Spatial Framework
Design Strategies- by Edge and inner block

The Inner Block

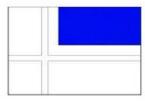


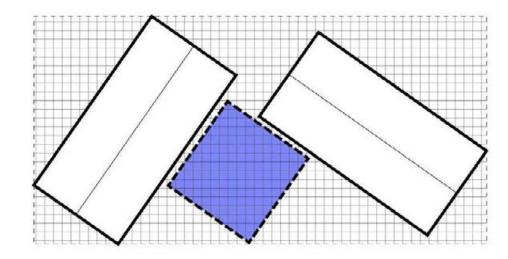


Grouping two buildings together creates shared ground and public facilities by utilizing changes in the ground level.

Spatial Framework
Design Strategies- by Edge and inner block

The Inner Block

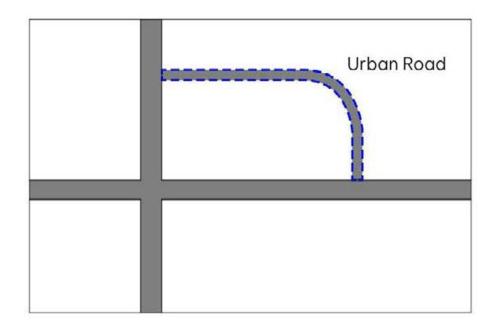




Using the rooftop to define semi-outdoor public space between the two buildings, under which shared facilities can be located.

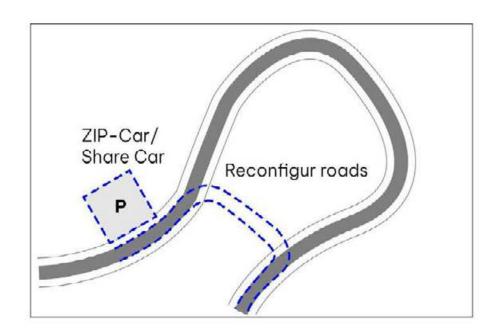
Spatial Framework
Design Strategies- by Road and Plots

If the site area > 250,000 sq ft, urban roads should be introduced to create smaller urban plots and introduce mix-used activities



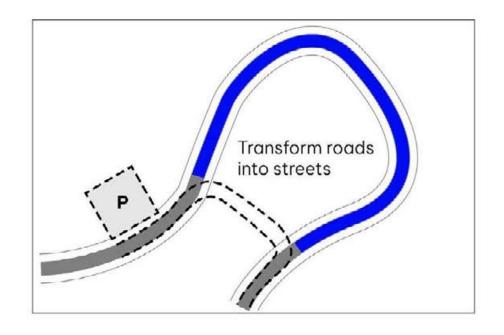
Spatial Framework
Design Strategies- by Road and Plots

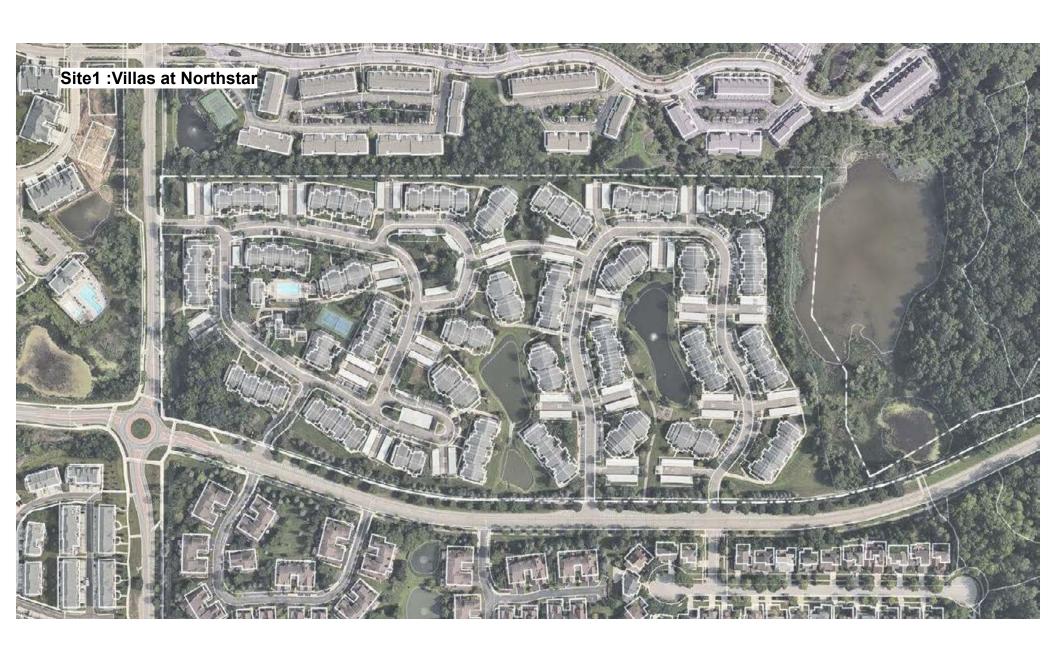
By introducing shared vehicle facilities, the demand for parking spaces and road space can be reduced by 40%, thus reconfiguring roads.

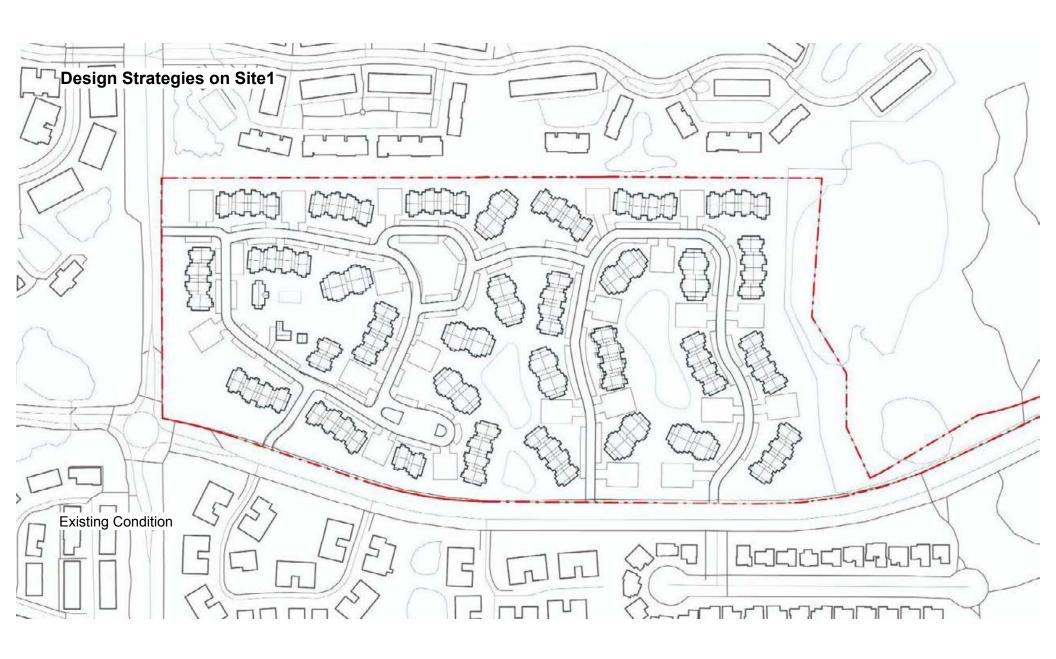


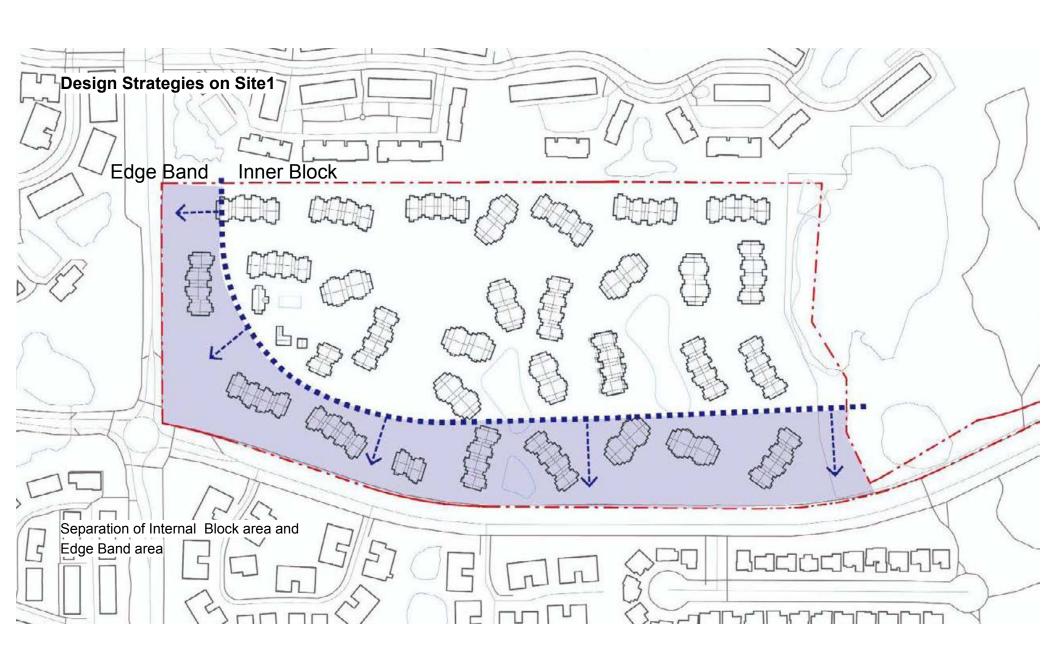
Spatial Framework
Design Strategies- by Road and Plots

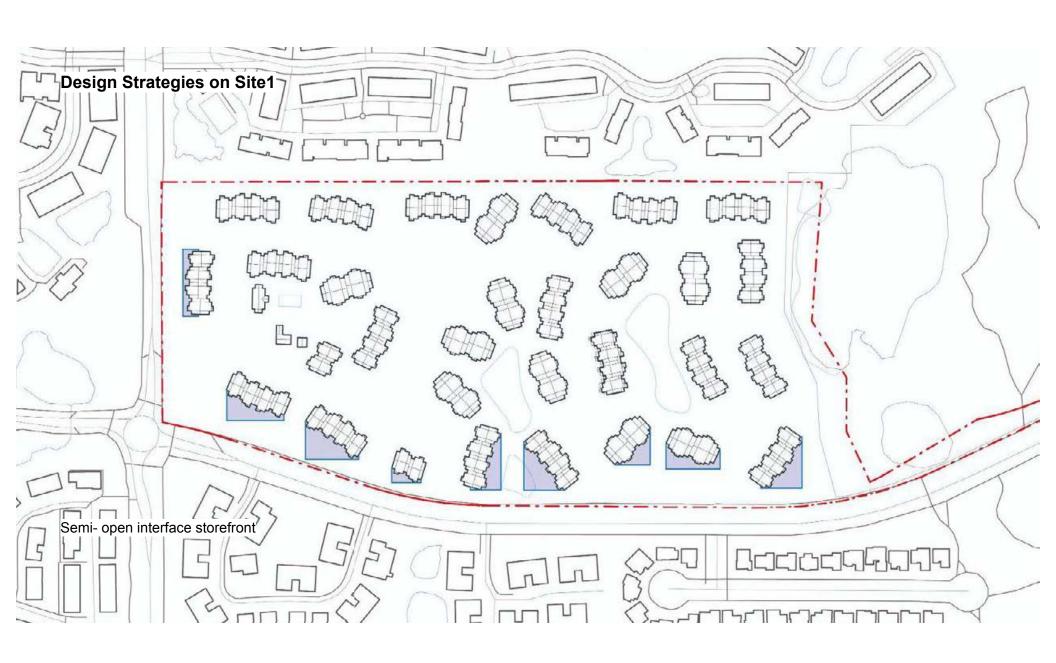
Transform roads into streets; pedestrian zones; plazas (used for public events); and even newly constructed spaces.









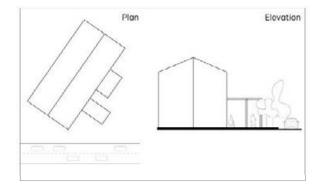


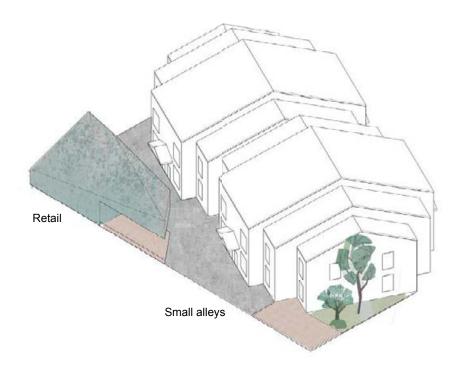
Design Strategies on Site1

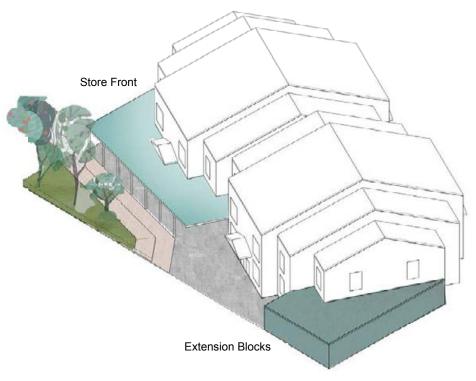
The Edge Band

Semi- open interface storefront

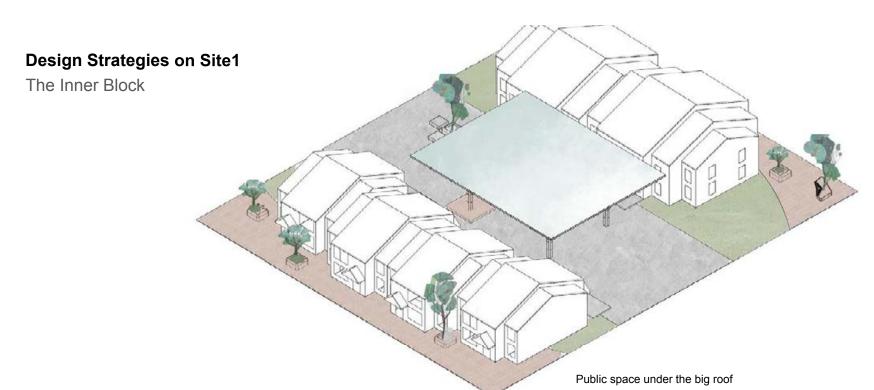
Mix-used and more density in the frame

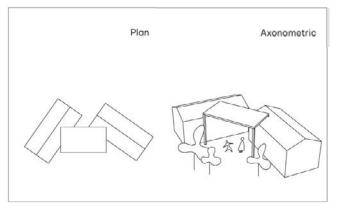






















Design Strategies on Site1

The Existing "Road"



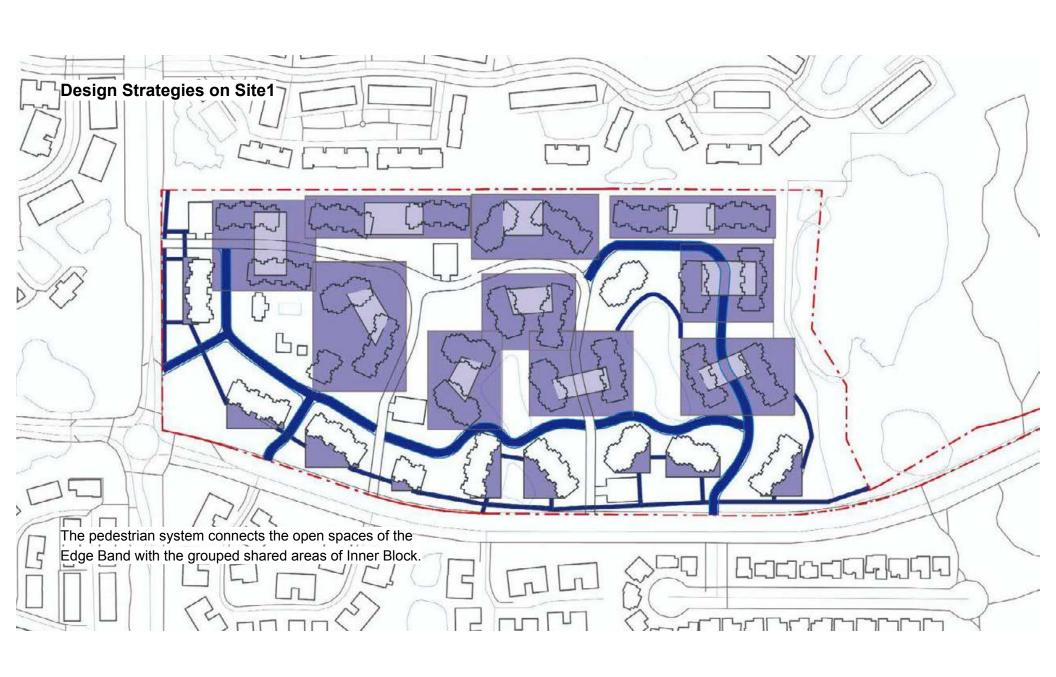
Road System designed for cars

Design Strategies on Site1

The Pedestrian "Street"



Closed roads should prioritize pedestrian use, and street furniture and small activity plazas should be added to linear spaces.







- Student pay! Property tax
- •How to engage small fund?
- Population coverage
- •3000ppl for small retail
- cycling paths, jogging routes
- •Connection to AA public space —>bus routes
- •BOOK>>Retrofitting Suburbia (Ellen Dunham-Jones)
 BOOK>>In the Shadow of the Ivory Tower (Davarian Baldwin)

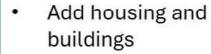




Temporary

- Streets
- Edge/ Community
- Small retail/ events

More Density



More Population

EDGE

· Add retail streets





- Public space
- Turn Road to Streets

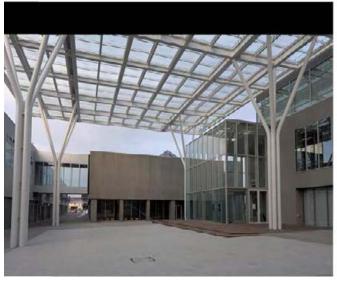






























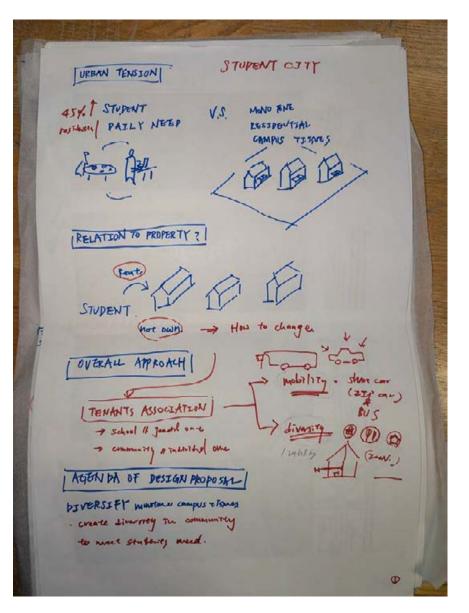


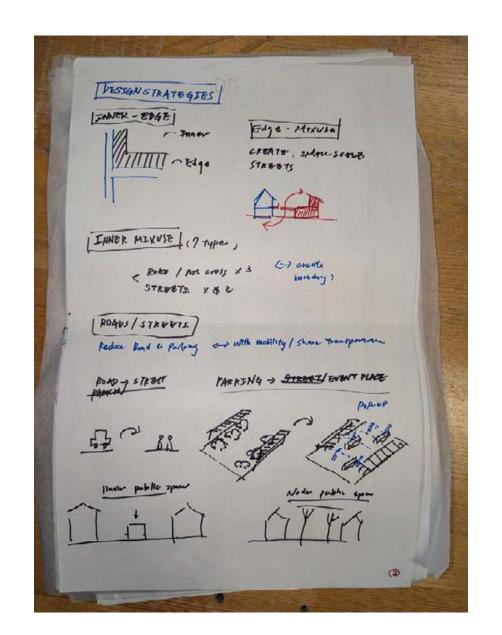
- •What is the urban tension at hand?
- •What is its relation to property?
- •What is your overall approach to address the tension, in simple general terms?
- •What is the agenda of your design proposal? What are you trying to accomplish?
- What are the multiple design strategies you are using towards that agenda?

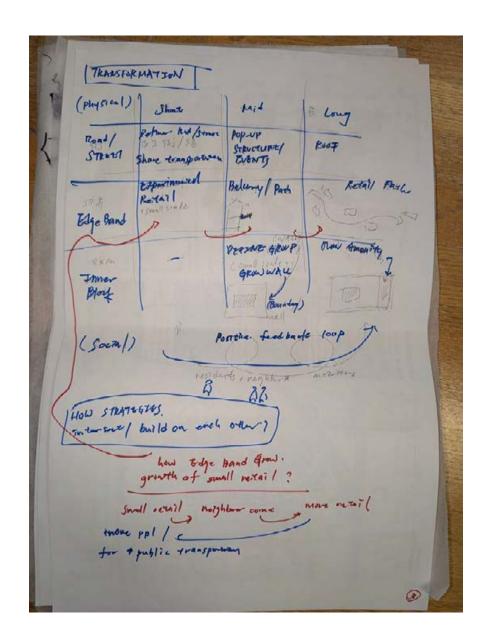
- •What does each strategy actually do, in terms of 1physical social ecological transformation and 2-catalyzing further change? Why are these strategies effective?
- •How do the strategies intersect and/or build on each other?

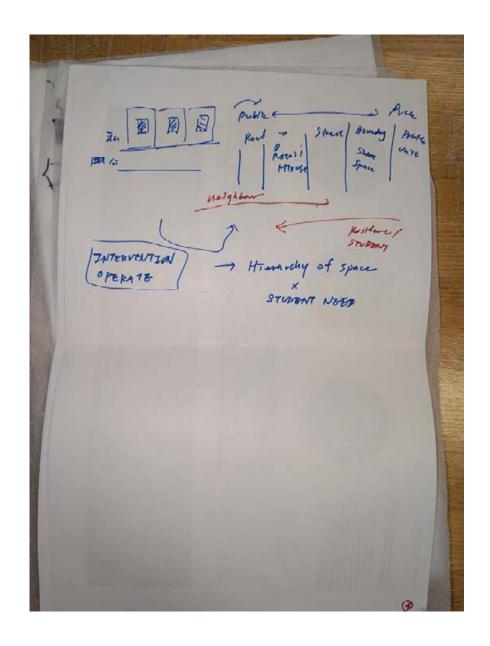
How have you considered multiple scenarios playing out?

- •What does the place look like physically, socially, ecologically, legally once your intervention has started to operate?
- •How does your proposal link back to your urban tension identified, your analysis, and attitude to the issue?



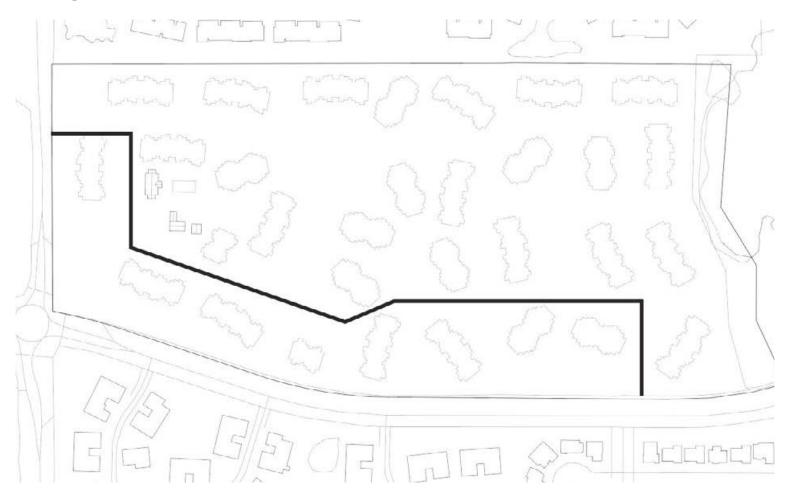






Student City

20251117



Differentiate between the internal block and the external open area first.

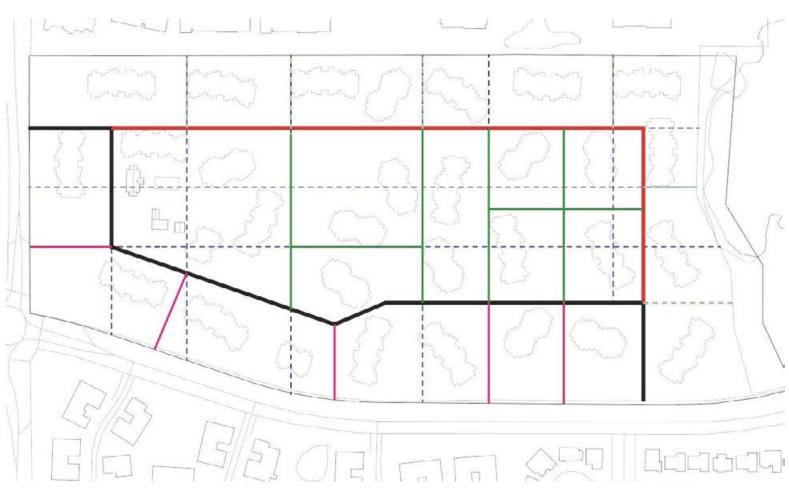


Divide the hierarchy roughly based on the existing houses, along either the X-axis or the Y-axis.

They may represent potential routes, either vehicular roads or streets.



Black and red indicate vehicular roads.



Along these axes, set up the corresponding streets.

These different linear routes may belong to different hierarchies—streets, pedestrian-only paths, or corridors that include bicycle lanes.

OP1



Within these axes, place small plazas with different functions.

For example, the green blocks represent general parking areas, the yellow blocks could host some retail or a children's play area, and the blue blocks indicate features like pools or water elements.

Use these block parcels to define the structure of this otherwise random community.

OP1-1



Apply the same approach to the external open areas, with the difference that the added buildings follow the flow of the roads, establishing connections with the existing buildings while remaining distinct from the internal block areas.

The added rectangular parcels in the external area can serve other functions, such as the previously mentioned children's play areas, small plazas, bicycle storage points, or clusters of landscape trees.



OP1-2



The second approach for the external area is that the added buildings still follow the orthogonal orientation, but their overall massing flows along the existing roads.



Attempt 2_ Use landscape element to create pattern and spatial hierarchy



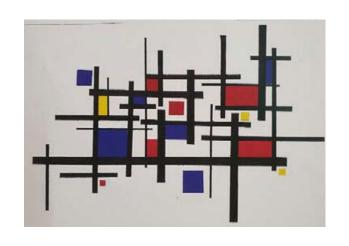
Frame by landscape(1)

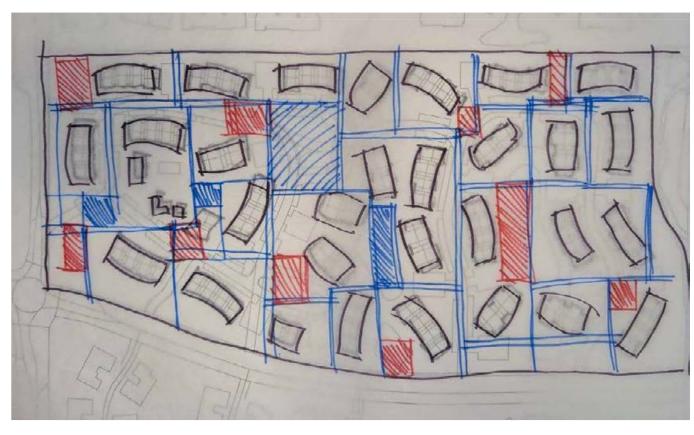


How do deal with the existing (potencial) awkward geometric open space? Sports field size are regulated **Buffer zone + Sports field**But the pattern doesn't make sense

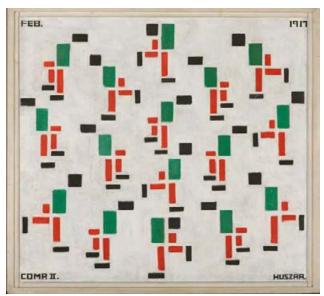
Frame by landscape(2)

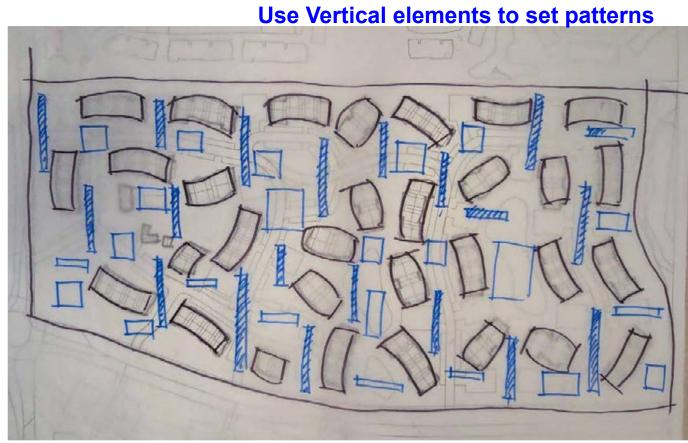
Set the frame first and than infill





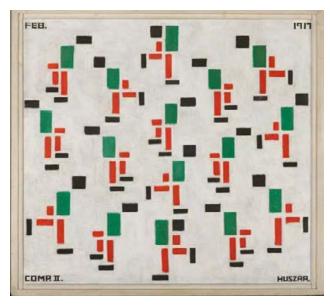
Frame by landscape(3)

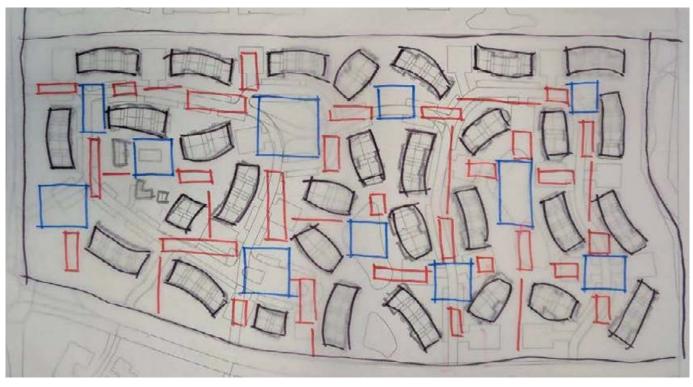




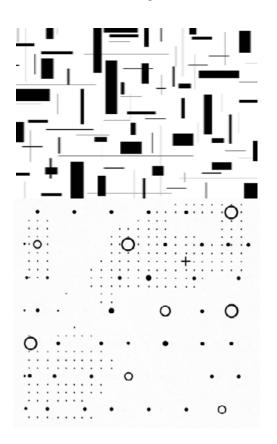
Frame by landscape(4)

Larger plaza areas to set patternsc

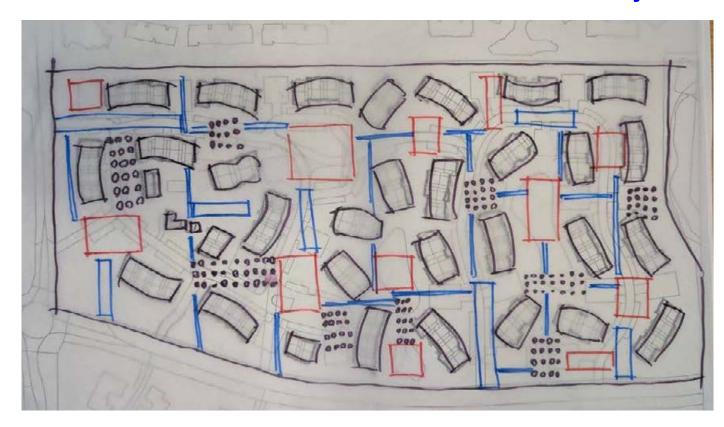




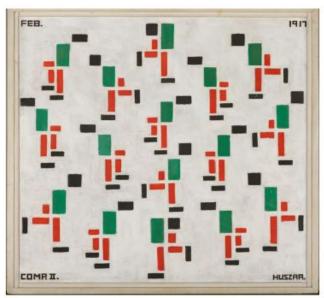
Frame by landscape(5)

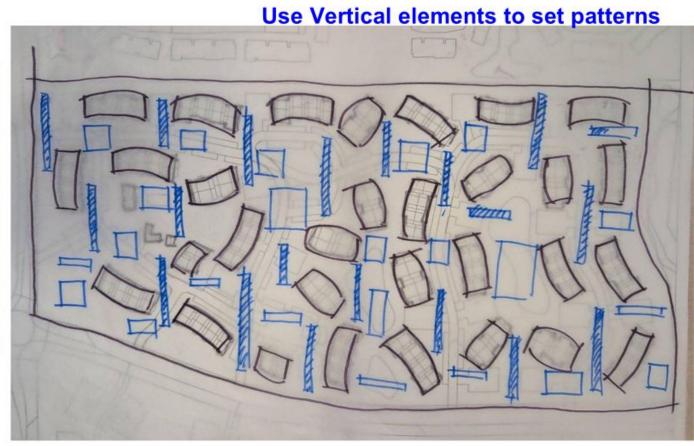


How about with some tree elements/ array?

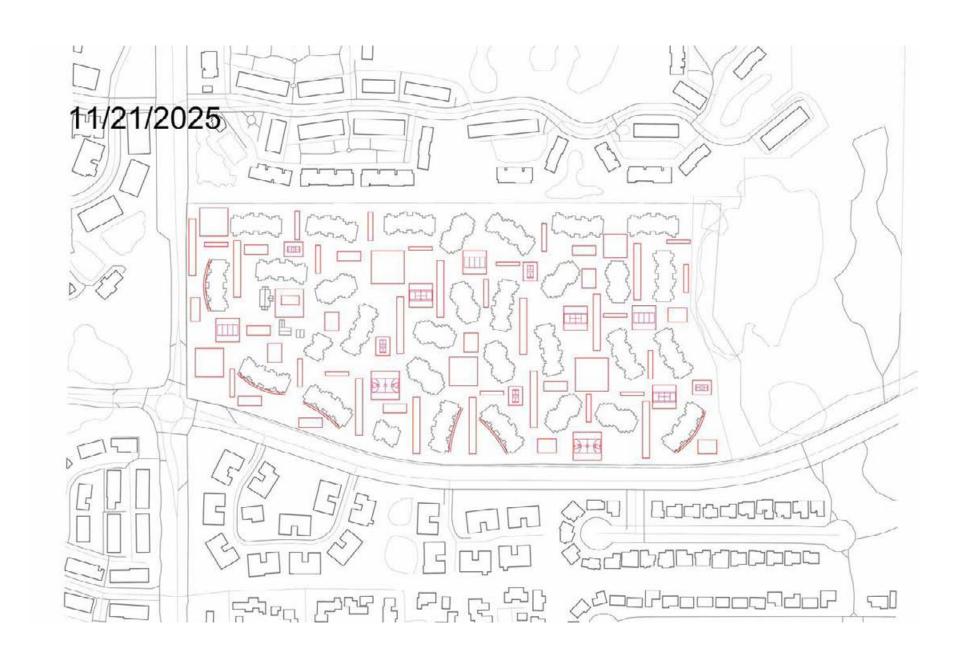


Frame by landscape(3)













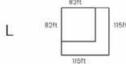








New Amenties Clusters







Roof











Plaza Stage

200000

50ft 65ft M



S





Community Garden



Community Kitchen with BBQ

Ann-

Pet Park

1

Commercial Buildings / Small Retail

Play Ground



1

Badminton Court



Childoare Center

Community GVM

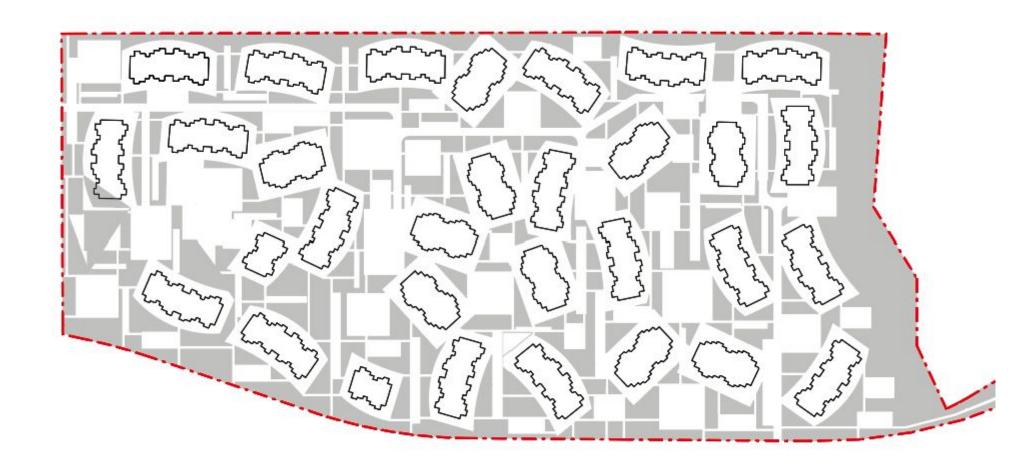
PU Rrunning Track

Tree Array

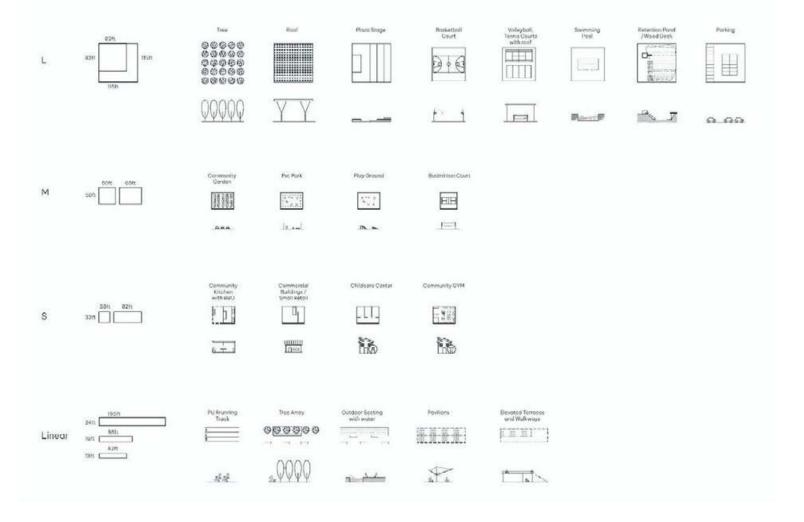
Outdoor Secting with water





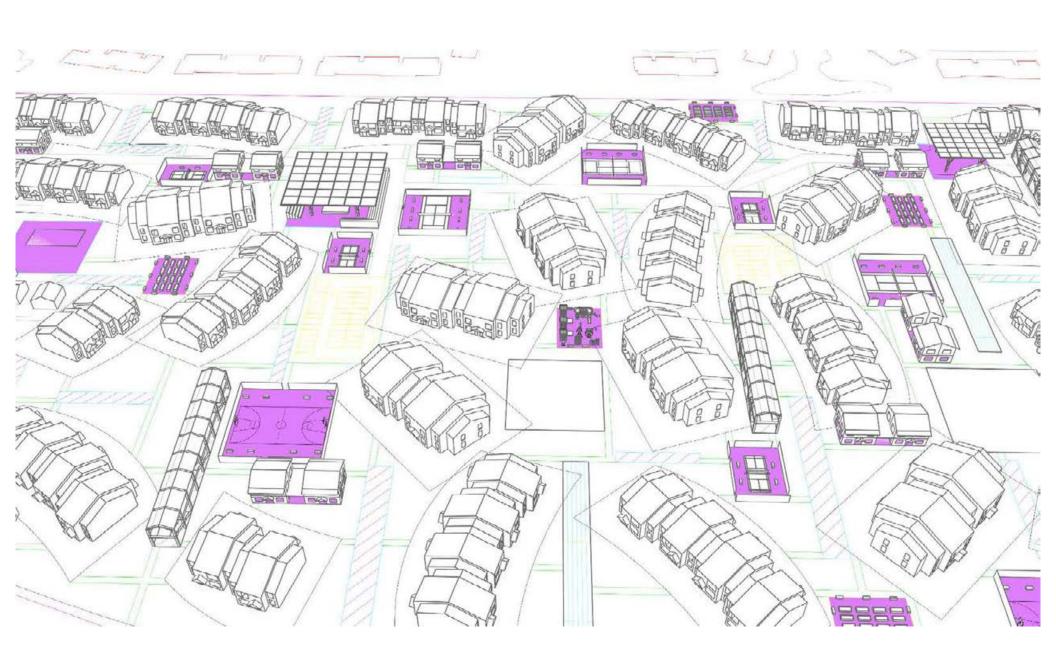


New Amenties Clusters







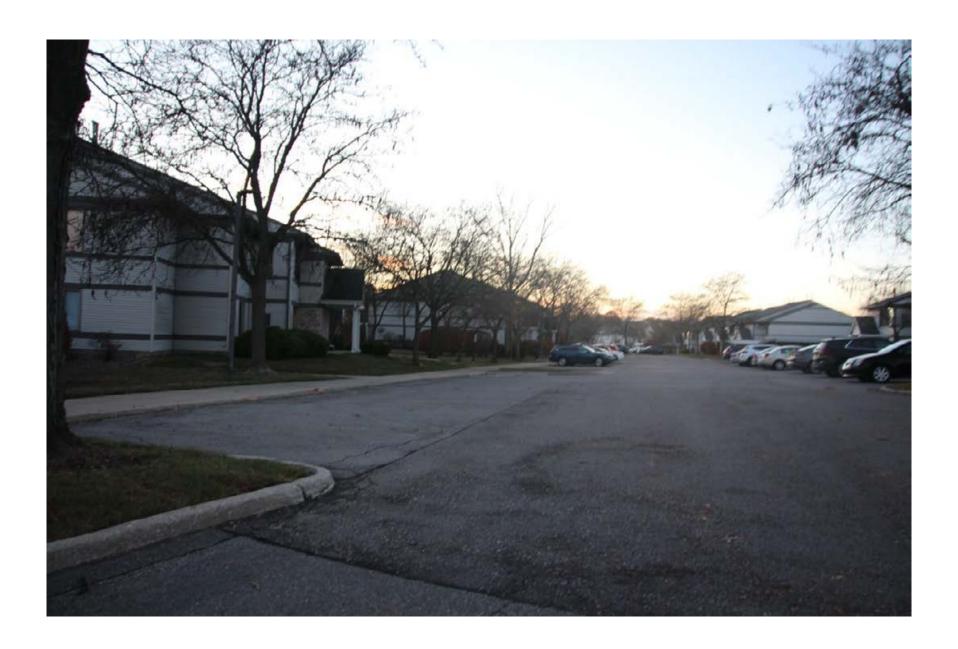
























EXISTING Amenties



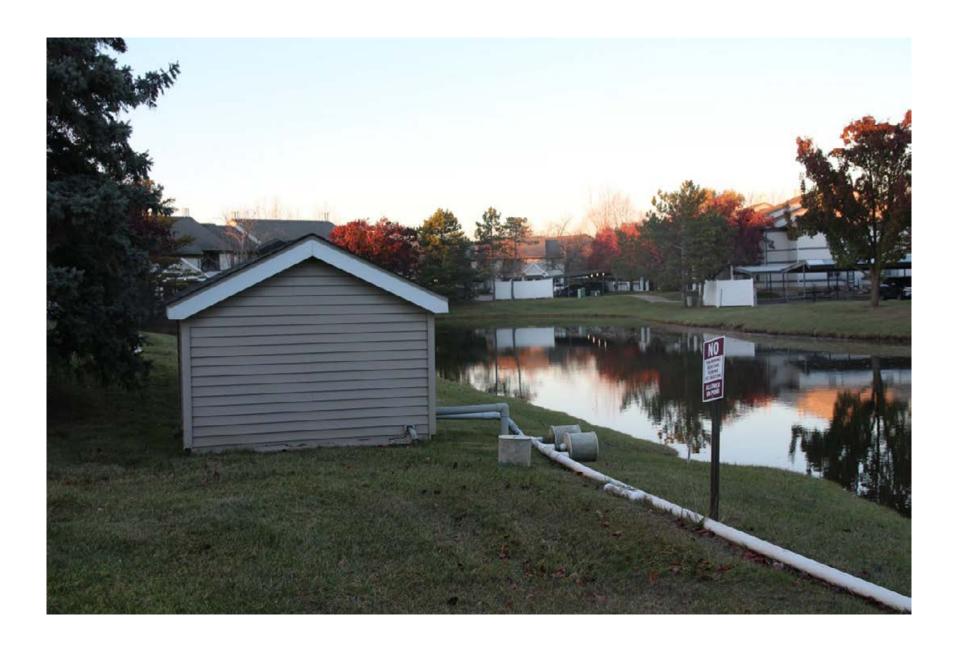


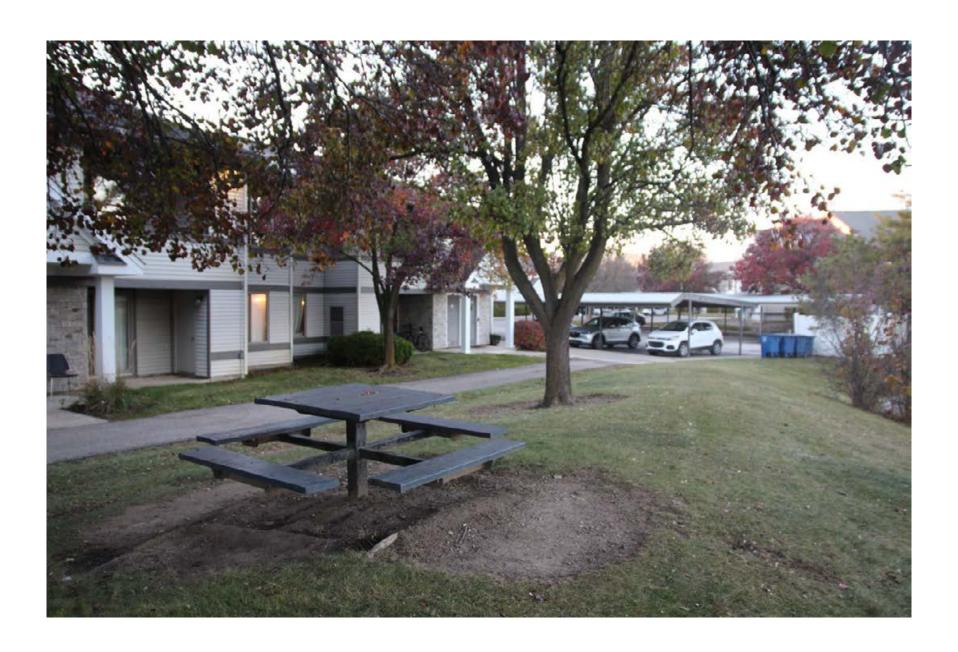


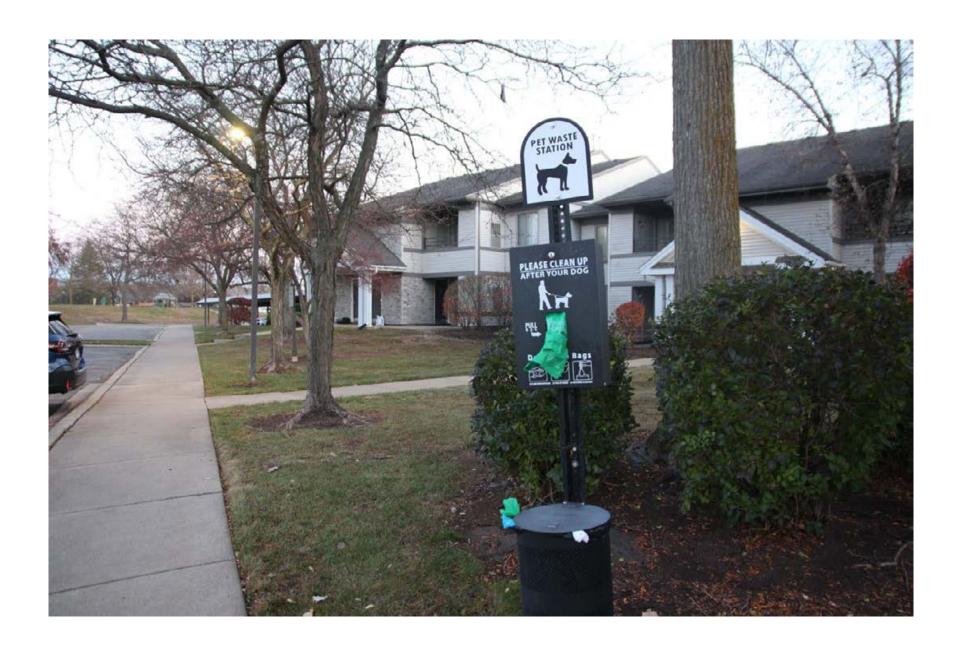


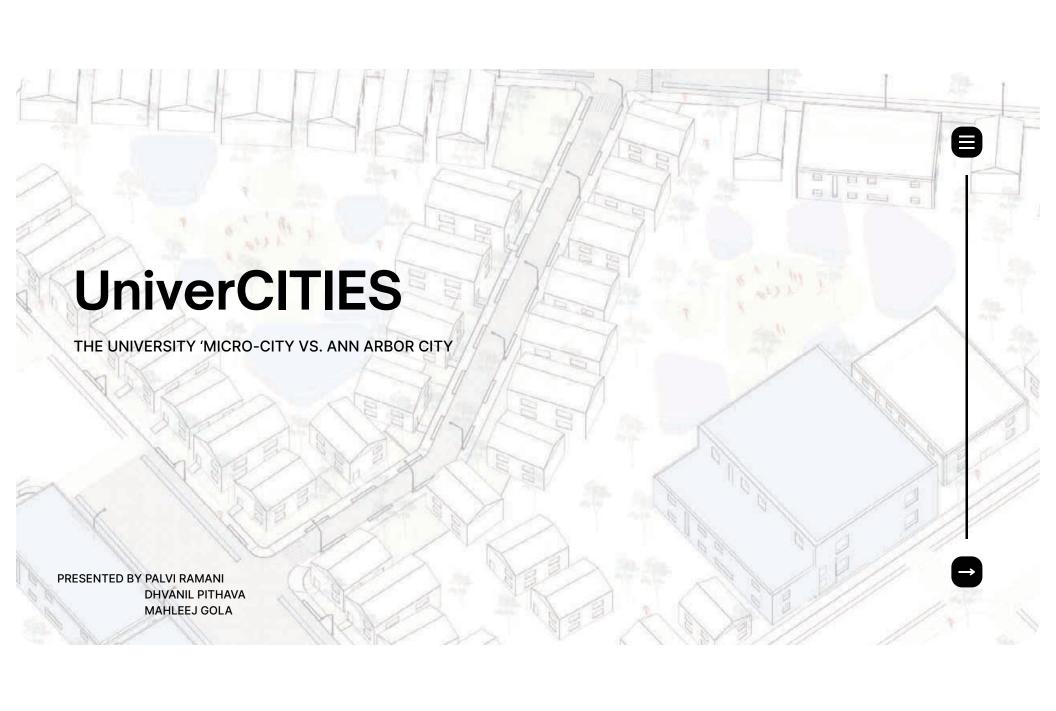




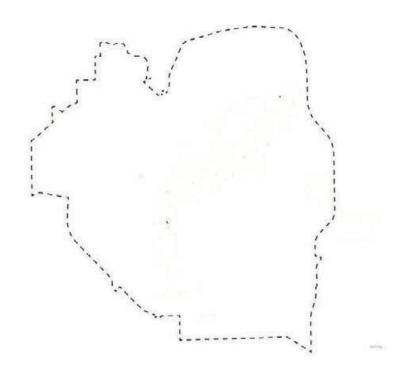








The Presentation **Overview**





THE SYSTEM

ACTOR NETWORK, DIAGRAMS, GIS ANALYSIS

01

CASE STUDIES

02 UNIVERSITY OF CAMBRIDGE, COMPARISON OF UMICH AND UOC

THE SITE

SITE ANALYSIS, PICTURES, UNDERSTANDING **URBAN-TENSION**

03

DESIGN INTERVENTIONS

ACTOR- NETWORK, 3 DESIGN INTERVENTIONS

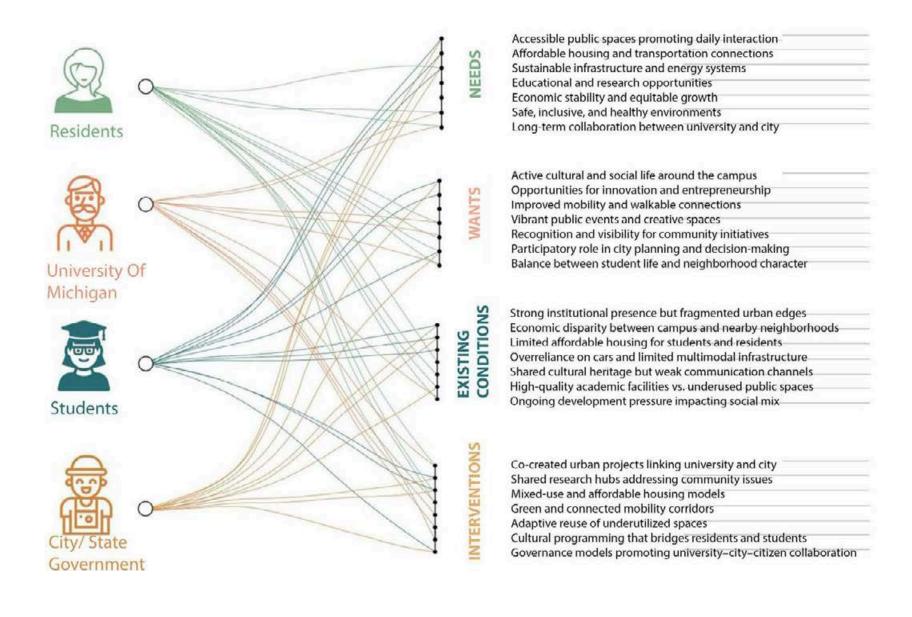
04

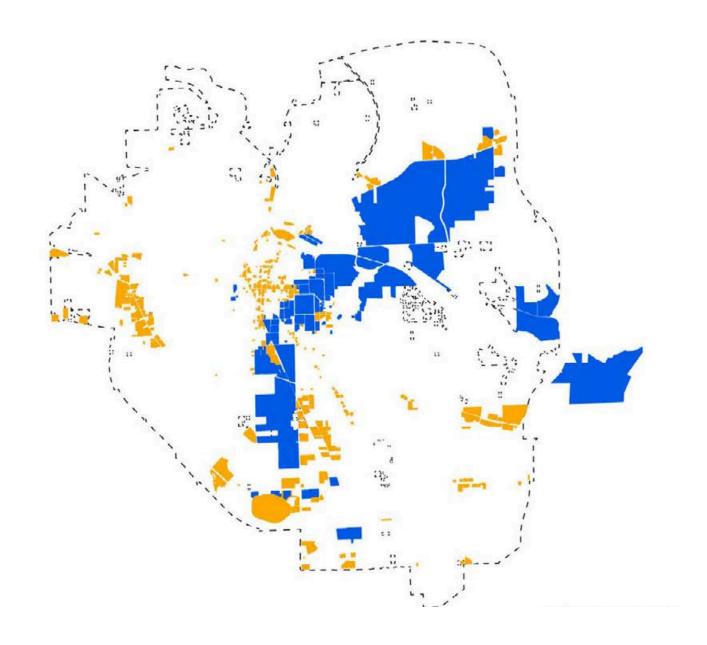
NARRATIVE: SPATIAL CONSEQUENCES OF THE CITY-UNIVERSITY DIVIDE

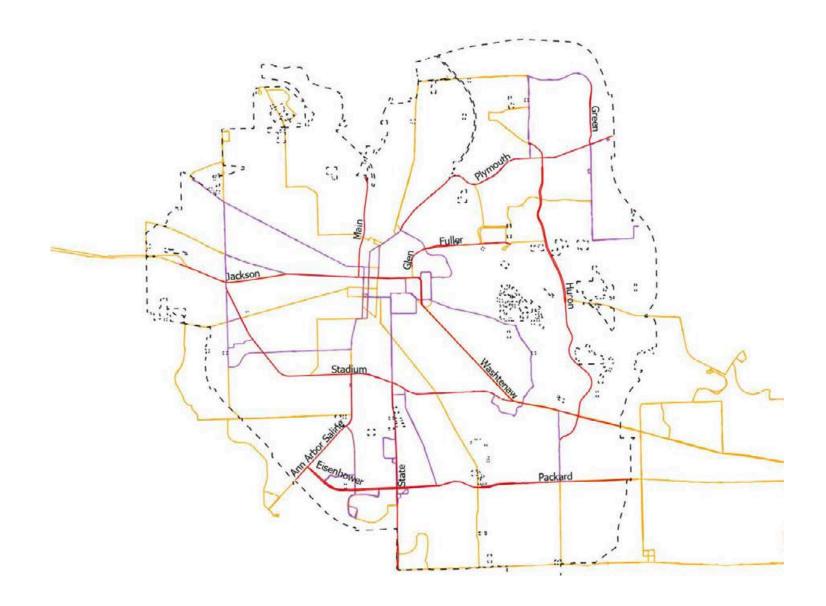
- As of Y2024. U-M owned approximately 9.4% of The land within the City of Ann Arbor U-M does not pay property taxes on its land or facilities, but does pay other taxes and makes payments to Ann Arbor including:
- \$16M water and sewer fees
- \$5.5M for fire protection, police services, review fees, and capital improvements
- -S3M in real estate taxes on the lease of -500.000 square feet in office/research and warehouse space
- -\$24.7M Total payments to Ann Arbor
- Fragmented Urban Fabric
- Weak Street Life Between Campus and City
- Monoculture of Student Housing
- Car-Dominated Access and Mobility
- Uneven Public Space Quality
- Underused Land and Edges
- One-Sided Development Patterns
- Land / Municipal Payments

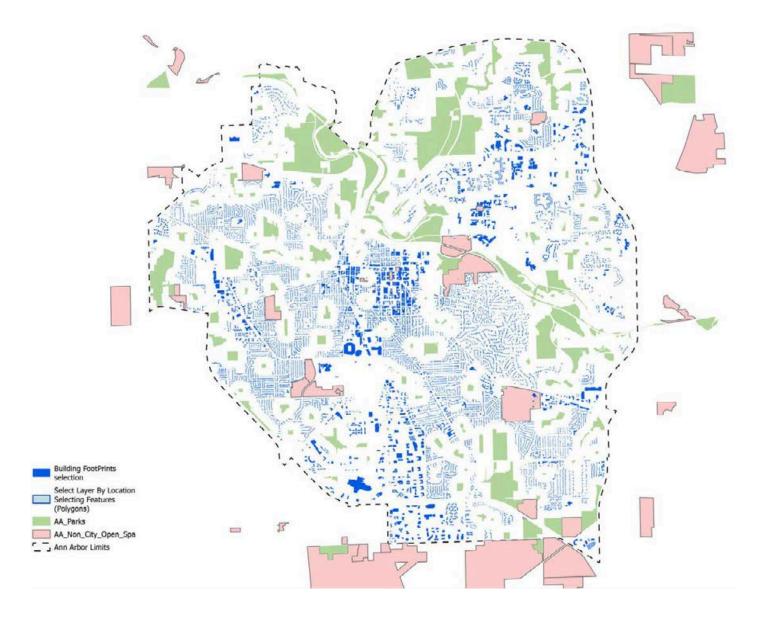
THE SYSTEM

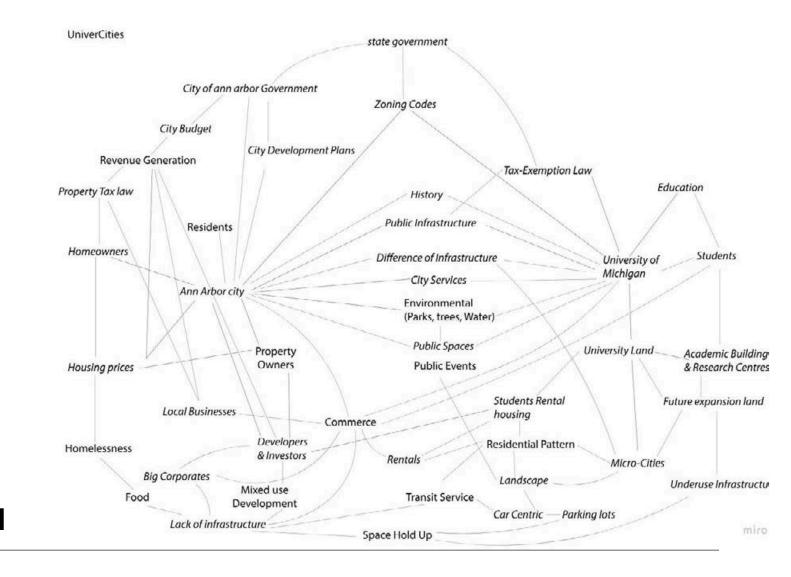












THE SYSTEM

ACTOR-NETWORK MAP

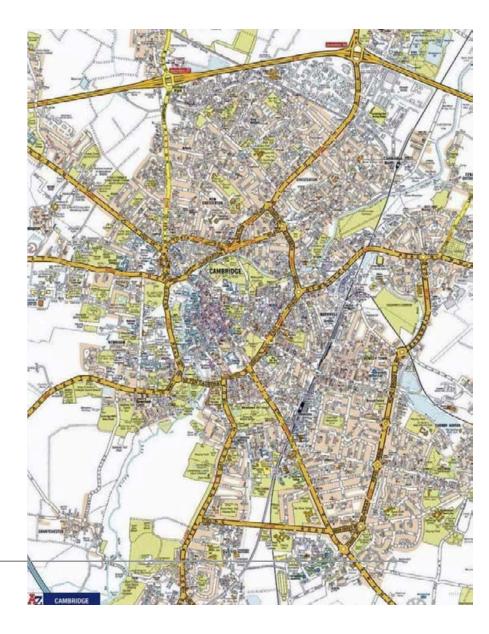
University of Cambridge: 'UniverCity'

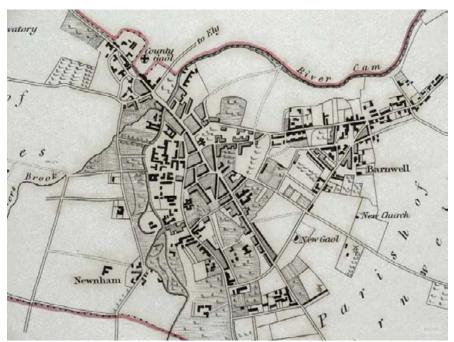
The University of Cambridge is deeply interwoven into the fabric of the city, creating a rare model of coexistence between academia and urban life. Unlike isolated campuses, Cambridge's spatial configuration is porous — its colleges, courtyards, and greens are dispersed throughout the historic core, shaping the city's structure rather than standing apart from it. This embeddedness allows learning, living, and civic life to overlap seamlessly. Streets are shared between students, residents, and visitors; university buildings line public routes; and open spaces such as the Backs, Market Square, and college gardens serve as everyday social grounds.

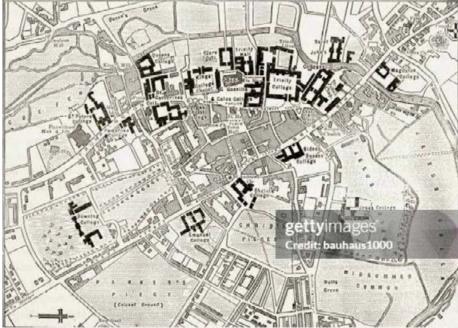
From an urban design perspective, Cambridge functions as a "city-university," where institutional and civic realms continually interact. The distributed layout encourages walking, chance encounters, and informal social exchanges — key components of a vibrant urban life. The mix of uses and scales, from intimate lanes to open quads, supports a sense of accessibility and belonging. The university also sustains the city economically and culturally, attracting global talent while maintaining a strong local identity. Its stewardship of historic architecture and landscapes ensures that academic expansion reinforces, rather than disrupts, the city's urban character.

Ultimately, Cambridge's success lies in its integrated form — a university not placed within the city, but as the city itself. This spatial and social interdependence fosters continuous dialogue between knowledge and community, making Cambridge an enduring model of how educational institutions can enrich civic life through thoughtful urban design.









1. INTEGRATED URBAN FABRIC – BLURRING CAMPUS AND CITY

At Cambridge, the university is not a separate campus but woven into the city's grain. Academic buildings, housing, shops, and public streets coexist, creating daily overlap between students, residents, and visitors.

2. CLUSTERED COURTYARD SYSTEM – HUMAN-SCALED ENCLOSURE

Cambridge's colleges are organized around courtyards and quads, creating semi-enclosed public realms that balance openness with identity. These spaces anchor social and academic life, offering layers from private to public.

3. PEDESTRIAN NETWORK AND PERMEABILITY

Cambridge's compactness supports a walkable network of lanes, greens, and passages, promoting casual encounters and strong visual continuity.

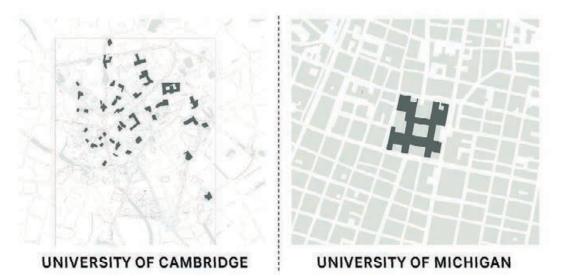


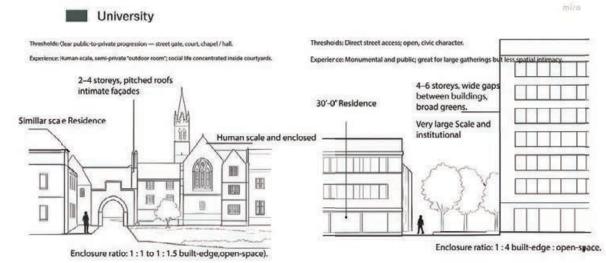
SPATIAL CONFIGURATION BETWEEN UNIVERSITY OF CAMBRIDGE AND UNIVERSITY OF MICHIGAN

The University of Michigan has a more campus-based, zoned spatial configuration, where academic, residential, and athletic areas are separated into distinct districts. Large blocks, wide roads, and surface parking create fragmentation and clear boundaries between the university and the surrounding city. The campus often functions as an enclave, with limited integration into adjacent neighborhoods.

In contrast, the University of Cambridge is fully embedded within the city's urban fabric. Its colleges and facilities are dispersed throughout the historic core, forming a network of interconnected courtyards, streets, and greens that blend seamlessly with civic life. Cambridge's small-scale, walkable pattern encourages interaction between students, residents, and visitors.

Essentially, Michigan operates as a campus within a city, while Cambridge exists as a city-university — spatially continuous, porous, and socially integrated.

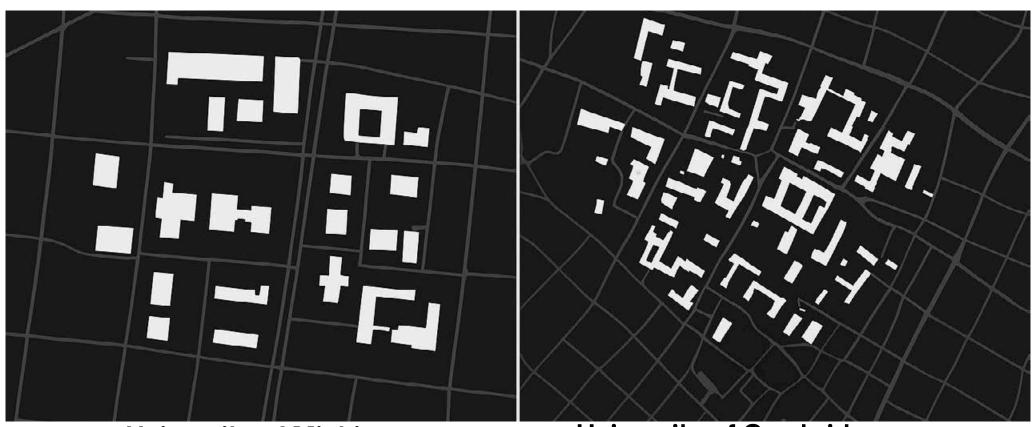




Typical Cambridge Building

Ann Arbor Diag/Quad

SPATIAL CONFIGURATION BETWEEN UNIVERSITY OF CAMBRIDGE AND UNIVERSITY OF MICHIGAN



University of Michigan

University of Cambridge

The South Quadrangle area in Ann Arbor roughly bounded by State Street, Hill Street, Packard Street, and Hoover Avenue is a unique urban zone where the University of Michigan's institutional land directly meets the residential fabric of the city. It represents a key interface between campus and community, with mixed land uses, fragmented ownership patterns, and contrasting spatial conditions.

To the north, the area connects to the main Central Campus — including academic buildings, the Law Quad, and student housing like West Quad and South Quad dormitories. These are dense, pedestrian-oriented spaces with enclosed courtyards and structured circulation that reflect the university's internal order.

To the east, across State Street, lie more university facilities such as the Athletic Campus and Yost Ice Arena, gradually transitioning toward the Michigan Stadium and Ferry Field. This side has larger institutional blocks and limited permeability, contrasting the finer-grained residential fabric to the west.

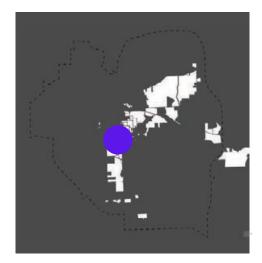
To the south and west, the fabric shifts to city-owned land and private houses, mainly older single-family homes and student rentals. Streets like Packard and Hill form a transition zone, with cafes, convenience stores, and rental apartments catering to both students and long-term residents. These edges often experience tension socially and spatially as university expansion pressures the surrounding neighborhoods.

What's notably absent in this area is a clear public interface or shared civic space that connects the institutional and residential sides. The boundaries are porous yet uncoordinated university lawns end abruptly at private yards, and circulation routes don't align. This lack of integrated planning leads to fragmentation, despite physical proximity.

In essence, the South Quadrilateral is a threshold zone a landscape of overlapping ownership, contrasting spatial scales, and blurred urban identity offering potential for design interventions that balance university growth with community connection.







The South Quadrangle area in Ann Arbor roughly bounded by State Street, Hill Street, Packard Street, and Hoover Avenue is a unique urban zone where the University of Michigan's institutional land directly meets the residential fabric of the city. It represents a key interface between campus and community, with mixed land uses, fragmented ownership patterns, and contrasting spatial conditions.

To ST DIVISION STREET

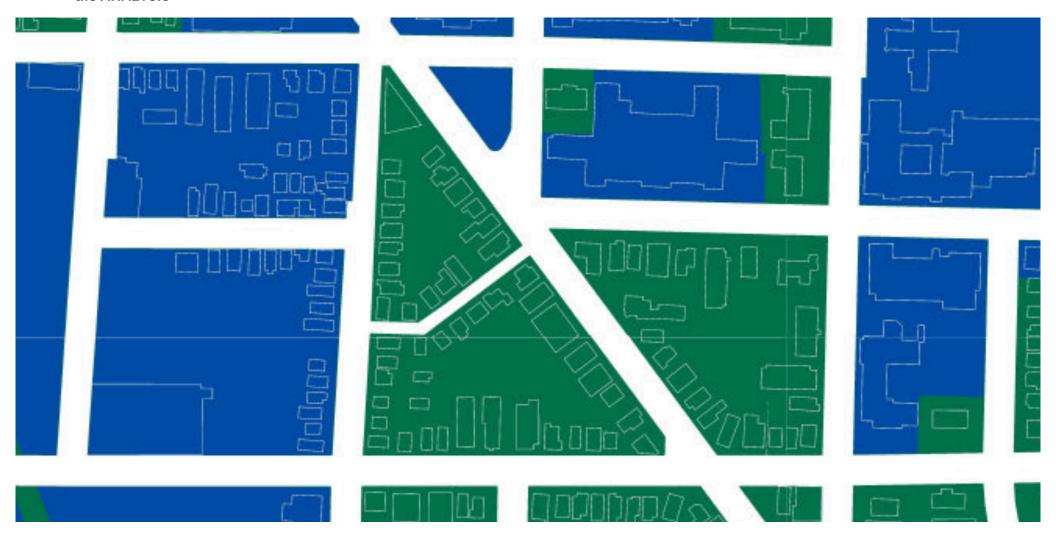


THE SOUTH QUADRILATERAL

CITY HOUSES

THE SITE

GIS ANALYSIS

















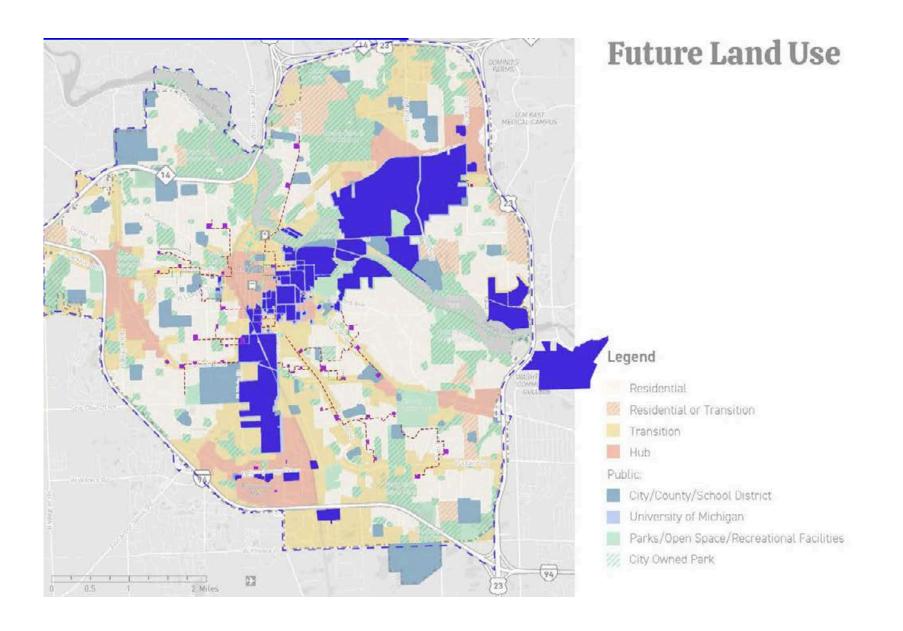


DESIGN INTERVENTIONS

STAGE 1. URBAN COLLECTIVE

STAGE: 2 CLUSTERED COURTYARDS
WITH PODS

STAGE: 3 GREEN CORRIDOR

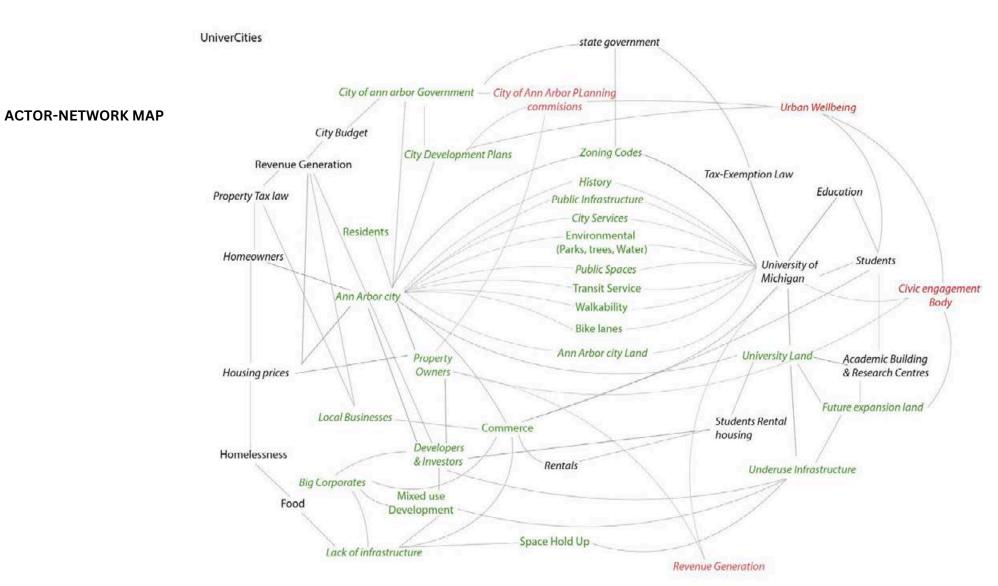


STAGE 1. URBAN COLLECTIVE

This proposal reimagines that relationship through the lens of collective campus urbanism — where the University and the City collaborate as co-stewards of the urban environment. The project introduces a Civic Engagement Body, a joint planning and funding entity that coordinates interventions such as green corridors, shared mobility infrastructure, modular markets, and ecological retrofits. Through these initiatives, institutional resources are reinvested into the city's social and ecological fabric.

The outcome is a model of mutual prosperity: the University benefits from a vibrant, sustainable city that supports its students and research, while Ann Arbor gains equitable infrastructure, new public amenities, and long-term revenue through shared stewardship. This collective framework transforms tension into partnership — envisioning a future where campus and city thrive together in a connected, liveable, and regenerative Ann Arbor.

DESIGN INTERVENTION









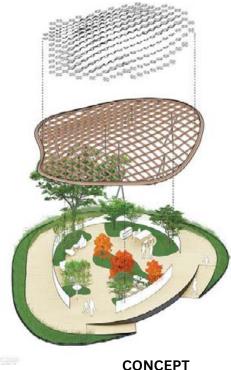


STAGE 2. CLUSTERED COMMONS AND MODULAR PODS

This intervention proposes a fleet of modular, semi-portable units that can be deployed temporarily in these spaces to host community and university activities. Each unit can serve as a small workspace, café, gallery, classroom, or gathering pod creating an adaptable network of "third places" that bridge the divide between institutional and civic life.

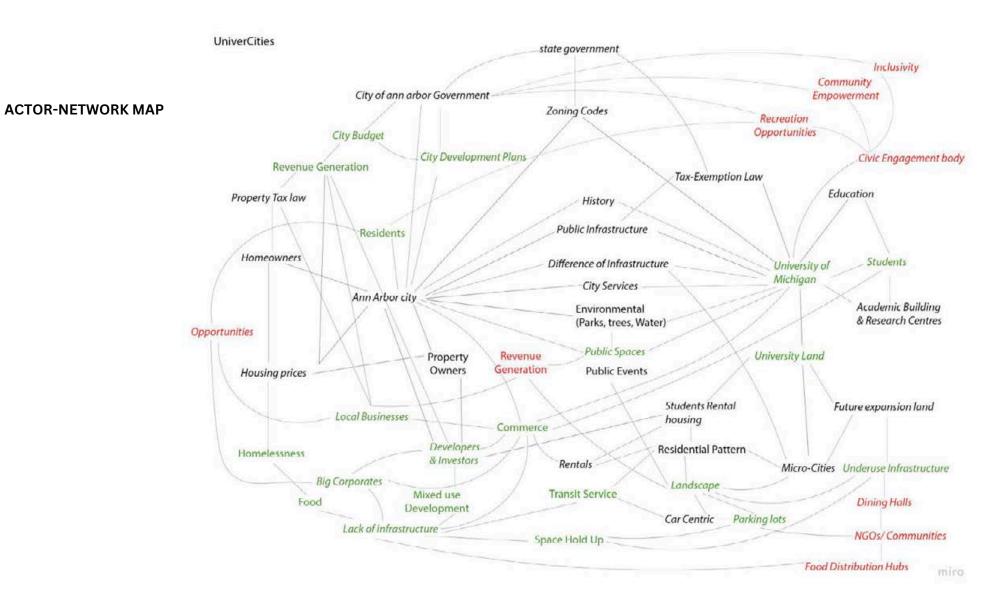
By introducing these flexible structures, the project directly challenges the city's mono-functional zoning, replacing single-use emptiness with layers of social and cultural exchange. Managed jointly by the University and a new Civic Engagement Body, the pods become shared infrastructure: open to students, residents, and local entrepreneurs alike.

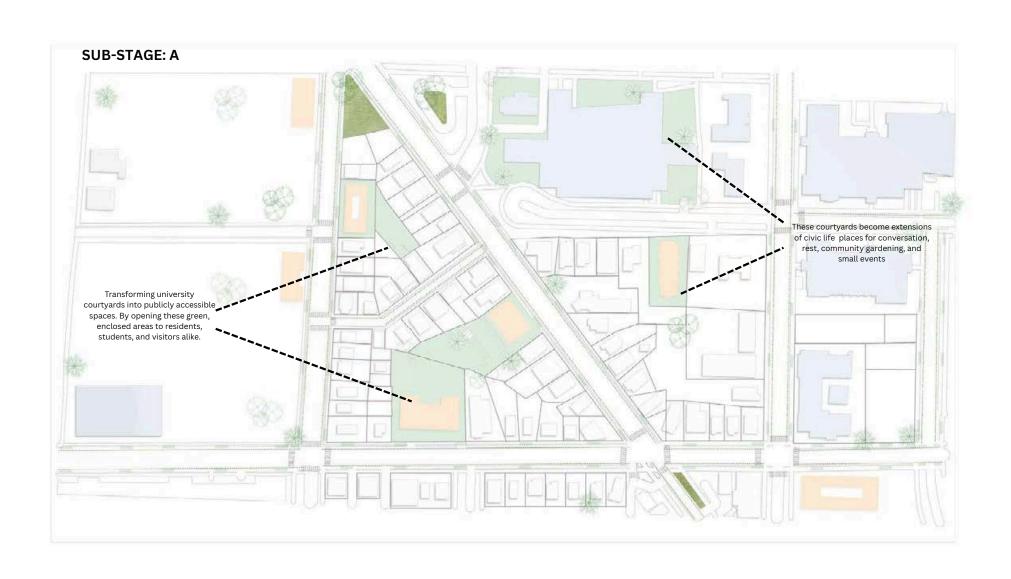
More than temporary objects, they represent a new way of thinking about ownership, access, and community within Ann Arbor's urban fabric where city and university co-create spaces for learning, collaboration, and everyday connection. This systemic form of tactical urbanism transforms leftover land into living public territory, demonstrating how small, mobile interventions can generate collective, long-term urban change.



CONCEPT

DESIGN INTERVENTION







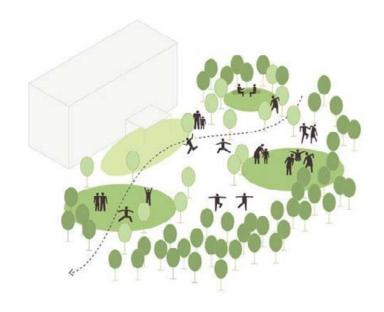




STAGE 3. GREEN CORRIDOR

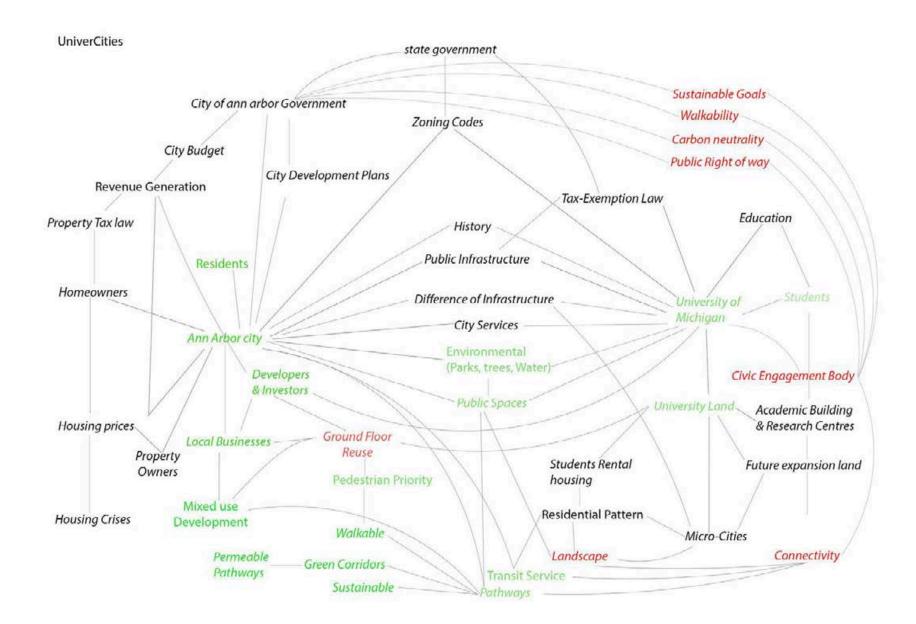
A new, expanded street will be redesigned to prioritize people, featuring protected bike lanes and a bold, cobalt blue pedestrian walkway that will act as a clear, guiding thread through the neighborhood, stitching together the campus and the community.

This will be more than just a path; it will be a living corridor. Bioswales will line the street, cleansing stormwater runoff, while a City-University program will provide DIY rain garden kits to empower residents to transform their own parking strips into mini-ecosystems. The entire route will be activated with new, elegant street lights and frequent benches, creating a safe, inviting, and beautifully connected space for students and residents alike to share.

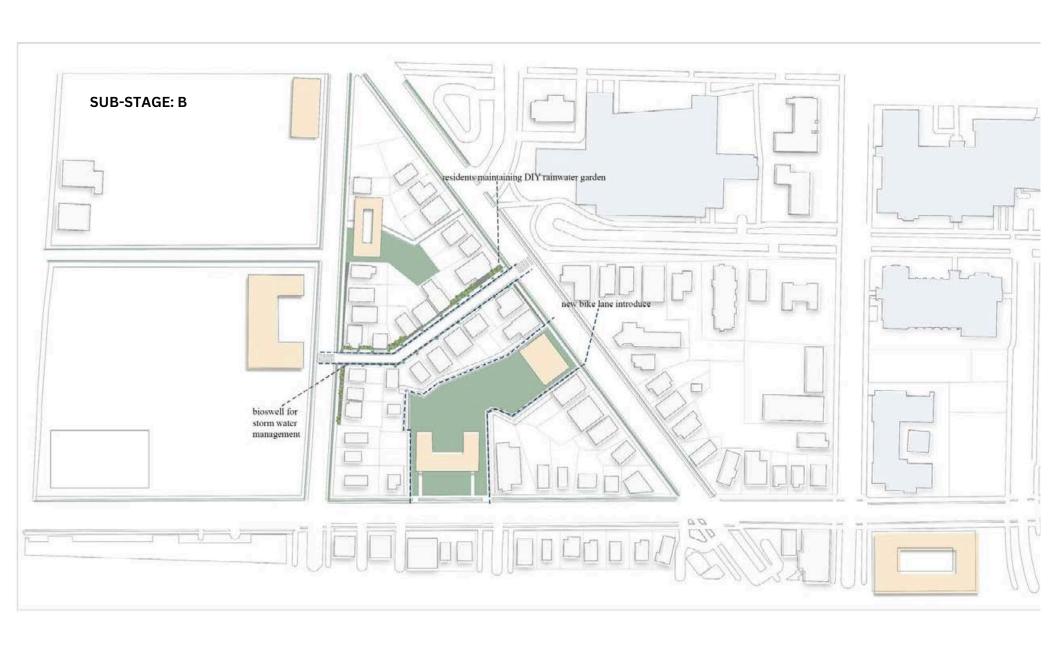


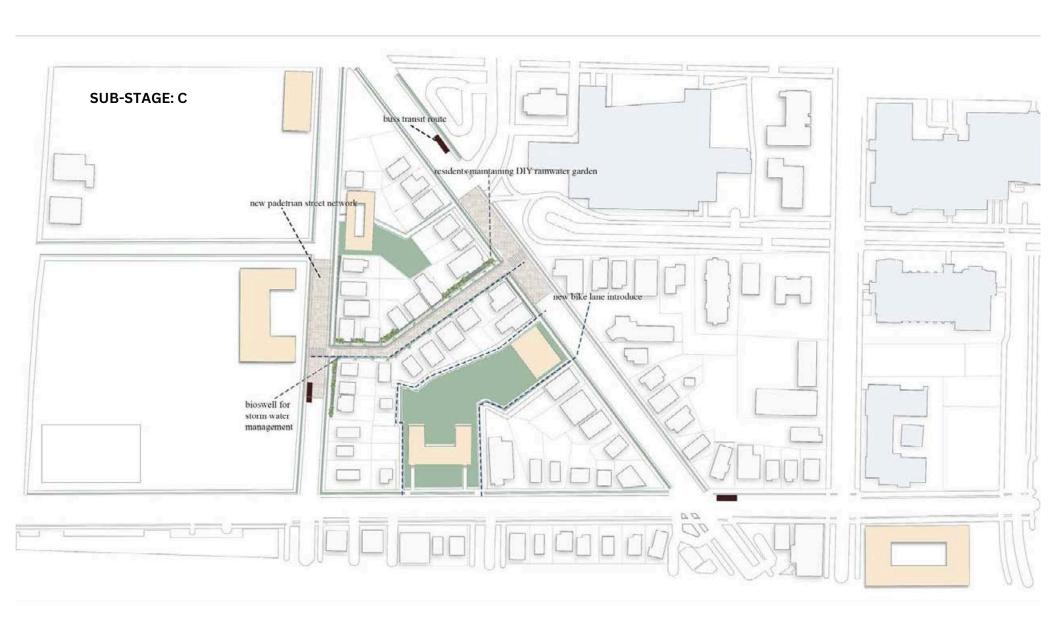
DESIGN INTERVENTION

CONCEPT

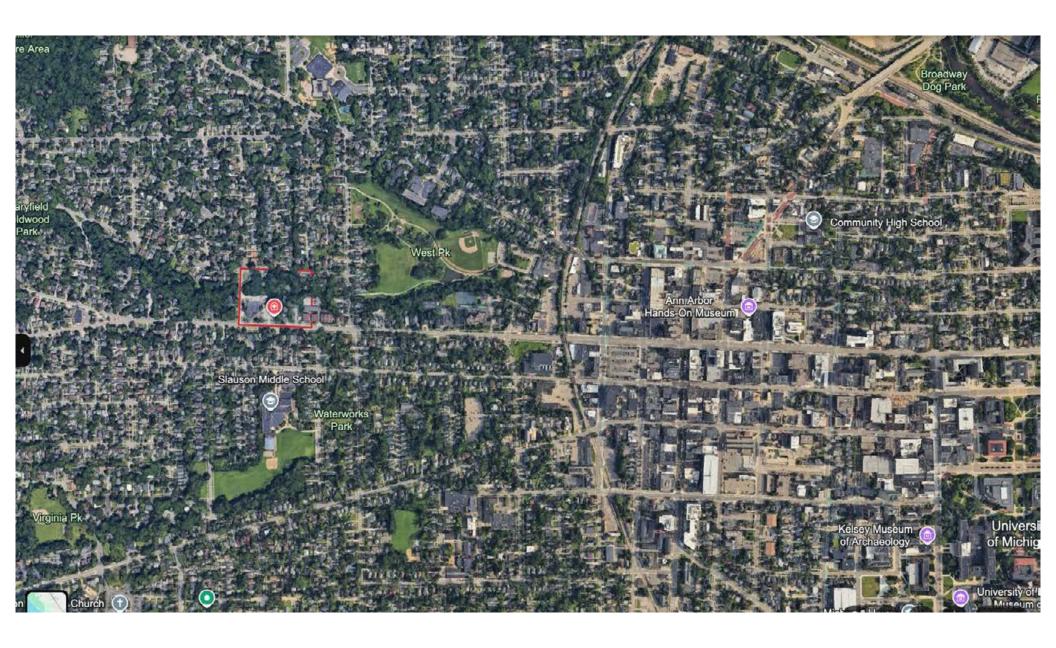












West Huron street

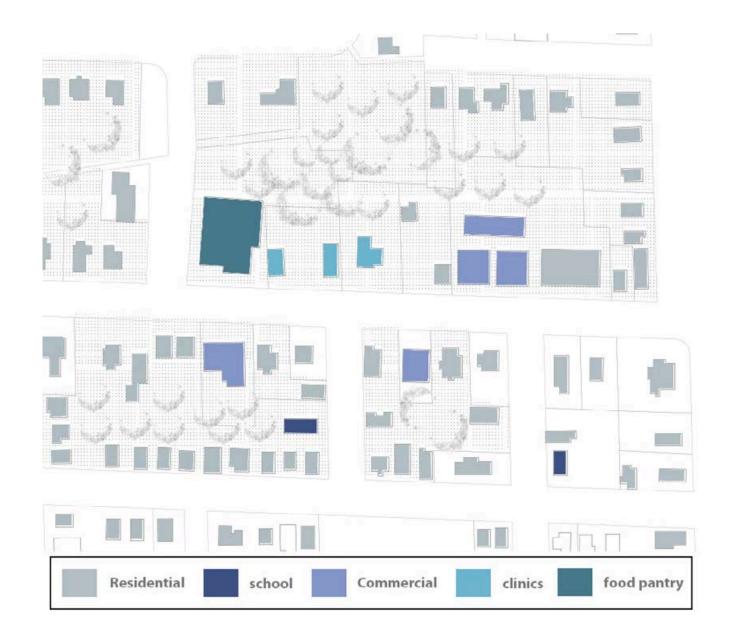
school

Commercial

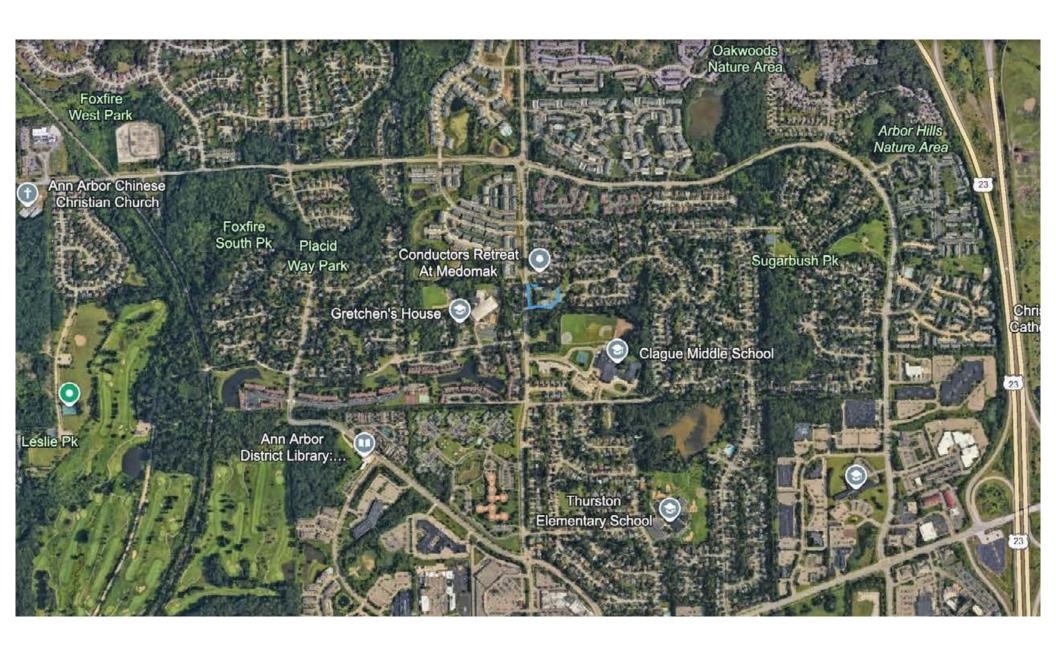
food pantry

clinics

Residential









West Huron Street Nixon Road



Thank You For Joining Us

PRESENTED BY PALVI RAMANI
DHVANIL PITHAVA
MAHLEEJ GOLA





















