# GRADUATION PORTFOLIO

DANIELA DÉU

M.S. ARCHITECTURE AND URBAN DESIGN 2022

COLUMBIA UNIVERSITY GSAPP

## CONTENTS

01



RIO HONDO BI-NATIONAL PARK

UD STUDIO III

P. 4

04



BEDFORD STUYVESANT MAGNOLIA TREE

UD STUDIO II

P.34

0 2



COMMUNITY
COUNTER VACANCY

UD STUDIO II

P.18

05



MAPPING COMMUNITY NETWORKS

SEMINAR

P.36

03



REDEFINING INFRASTRUCTURE

UD STUDIO I

P.28

06



MIAMI, MIRAGE, ME

SEMINAR

P.40



# 01

## RIO HONDO BI-NATIONAL PARK

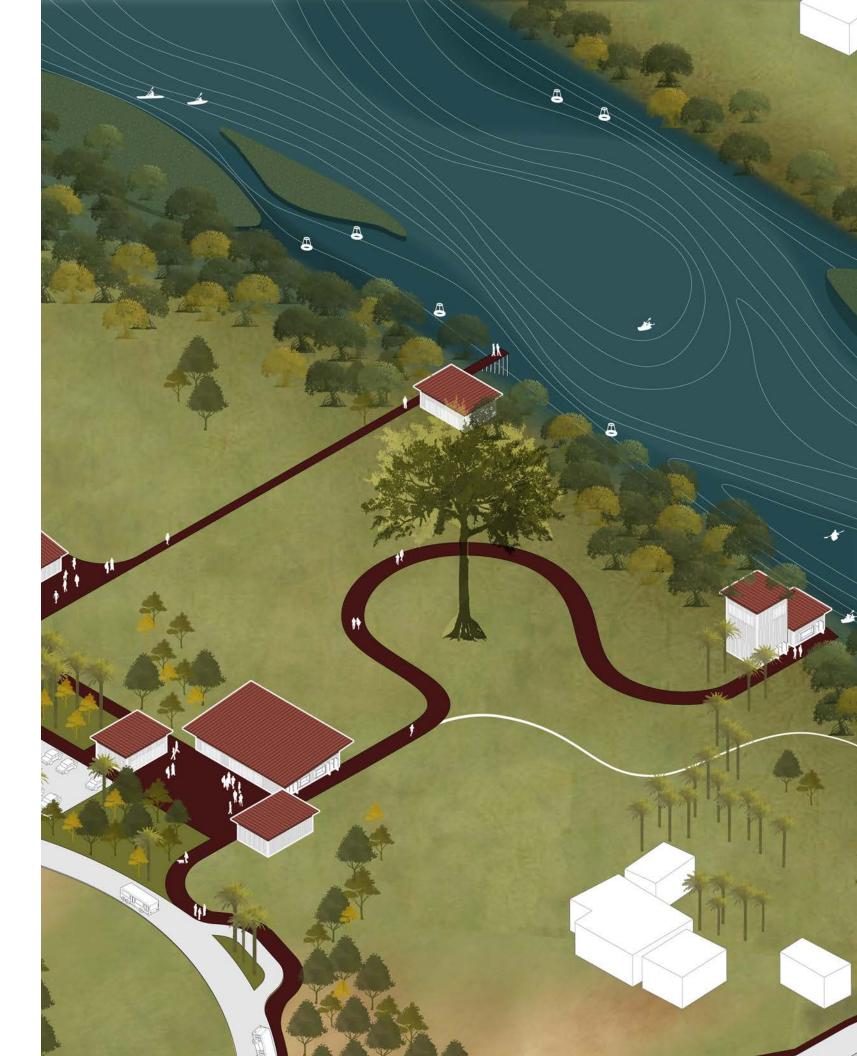
BELIZE + MEXICO

**The Rio Hondo** has been reduced from a porous watershed to a political boundary between Mexico and Belize. Agricultural expansion has increased deforestation and the pollution of the water table that is unique to this region.

Our proposal seeks to strengthen the collaboration between these two nations by drawing from the shared historic knowledge of the Yucatec Mayan communities. The Rio Hondo Bi-National Park is the driver in envisioning future of collective stewardship in the face of climate change.

**TEAM** Carmen Yu, Kimberly Ramirez, Tanuja Dhanasekaran **FACULTY** Kate Orff, Thad Pawlowski, Lorena Bello Gómez, Geeta Mehta, Adriana Chavez

Urban Design Studio III, Spring 2022



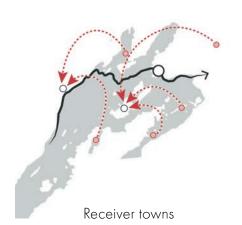
# RIO HONDO BI-NATIONAL PARK

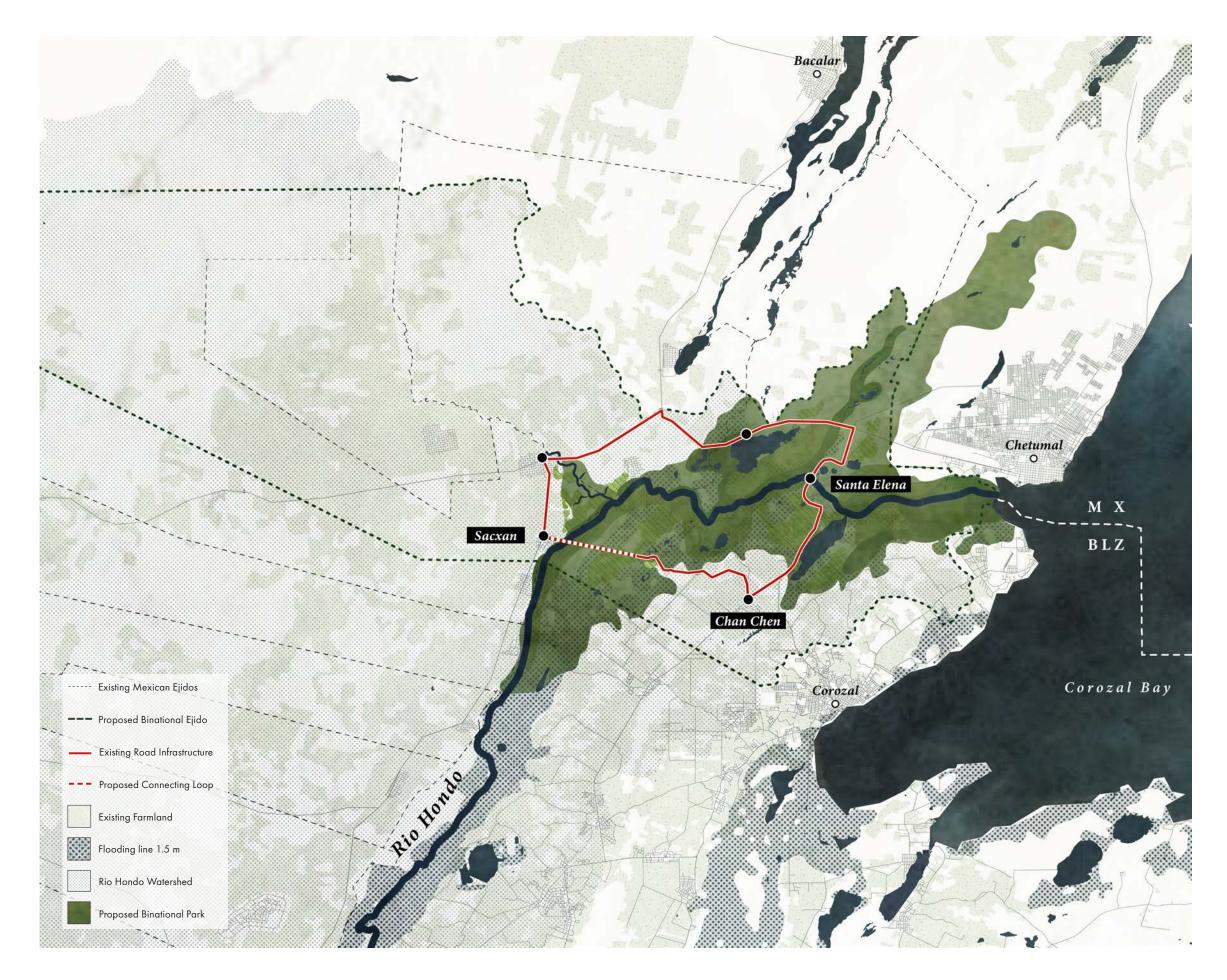




Binational Park







#### CULTURAL ROOTS

This region has a rich history and Mayan ancestry. A core element to this culture is the understanding that ecological and human needs are interconnected with various other systems weaving, informing, and influencing each other.

This stewardship has been disrupted, but this knowledge continues to exist within these communities. Our proposal hopes to tap into it and re-center the care of this landscape to the communities that have historically tended to it.

Key practices and concepts

CEIBA is a tropical tree native to Mexico,
Central America and the Caribbean. It served
as beacons for the Maya, representing
the deep connection that they had to their
surrounding landscape, and larger systems
such as the sky, the land, and the soil.

MAYAN CALENDAR Tun (1 year), Katun (20 years), Bakatun (295 years)

**YUCATEC MAYA** are an indigenous Mayan community native to northern Belize and the Yucatan peninsula.

**EJIDO** is a piece of land farmed communally under a system supported by the Mexican state

**MILPA** is an intercropping agricultural system used throughout Mesoamerica. This communal practice is central to a socio-cultural relationship between farmers, crops and land.

**CENOTES** are connected underground water systems unique to the Yucatan peninsula.





#### **STRATEGIES**

#### **BINATIONAL PARK**

Santa Elena | Mexico + Belize

The tax free zone at the border crossing between Sta. Elena and Subteniente Lopez is an existing financial binational cooperation model that we can build upon to establish a Binational park.

**RISKS:** Mangrove deforestation



#### **AGRICULTURAL TRANSITION**

Chan Chen | Belize

The Chan Chen is currently a major sugarcane monoculture village. Pesticide and fertilizer use seep into the underground watertable and pollute the Rio Hondo. We propose to reintroduce milpa and agroforestry which are less extractive and can diversify crops.

**RISKS:** Sugarcane monoculture



#### **RECEIVER TOWNS**

Sacxán | Mexico

Sacxán sits on higher ground along the fault line that runs through the Rio Hondo, making it an ideal site to transition into a **receiver town** in the event of future flooding due to sea level rise and storm surges.

RISKS: Flooding due to sea level rise



## **COALITION CENTER**

Education



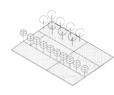














Commnity

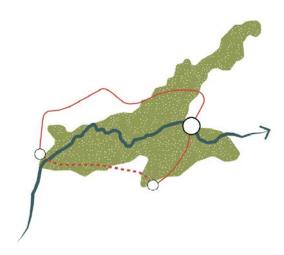
Infrastructure

Agriculture

Tourism

## **RIO HONDO BI-NATIONAL PARK**

Santa Elena | Mexico + Belize



The proposal revolves round the creation of a binational park. We extend the concept of the Mexican **Ejido** into Belize to form a **Transnational Ejido** that collectively manages and take sstewardship of the proposed Rio Hondo Bi-National park.

The shape of the park follows the watershed and projected flood line to buffer the river from agricultural run-off and development. Reforestation efforts will protect nearby resident from flood waters, and can help establish small scale regional eco-tourism therefore diversifying their economy.





Mangrove deforestation today



Swamp today



Future Flooding Event Bakatun - 395 years



Reforestation Tun - 1 year



Mangrove Forest Katun - 20 years

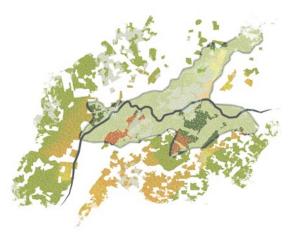


Eco-Tourism Katun - 20 years

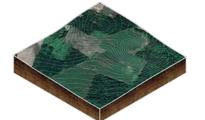
# Present Tun Katun 20 Years Coalition Center "The Stitch"

## **AGRICULTURAL TRANSITION**

Chan Chen | Belize



Through the knowledge shared in the Coalition Centers, we could incentivize a shift towards Milpa, a sustainable agricultural practice that traditionally uses maize, squash and beans due to their complimentary effects that support and balance each other. This shift could positively impact the water table as fertilizers would no longer seep into the system of cenotes present in this region. These changes would also affect the lives of Chan Chen villagers by diversifying their livelihoods and tap into the influx of tourism from the Tren Maya.



Monoculture today



Forest Restoration Tun - 1 year



Pasture and Livestock 2 years



Intercropping 10 years

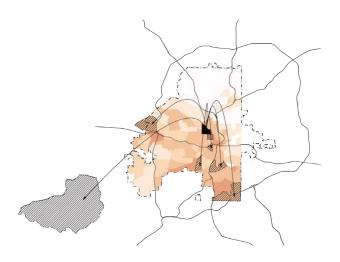


Crop Diversification Katun - 20 years



Wood Harvesting Katun - 20 years





# 02

#### COMMUNITY COUNTER VACANCY

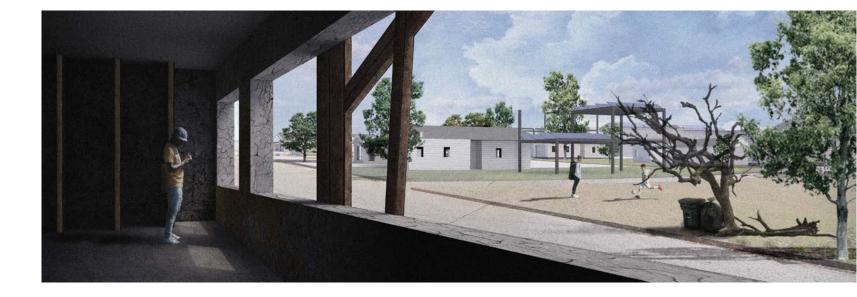
ENGLISH AVENUE, ATLANTA

This project aimed to analyze the impacts of property and the innequity that it perpetuates in the built environment. Our site of English Avenue was characterized by vacancy, but thorugh community outreach we learned of the existing communal value these spaces have, and how they can be catalysts for change.

We aimed to target vacant lots through a detailed policy plan, and transform them into spaces that generate a new type of wealth centered on collective and communal growth. Vacant spaces have sun exposure, alowing solar and wind energy generation to be a particularly effective means of generating wealth that can be redistributed back into the neighborhood.

**TEAM** Samuel Dye, Howie Jiang & Minsung Kim **FACULTY** Emmanuel Admassu, Nina Cooke John, Lexi Tsien, Chat Travieso

Urban Design Studio II, Fall 2021





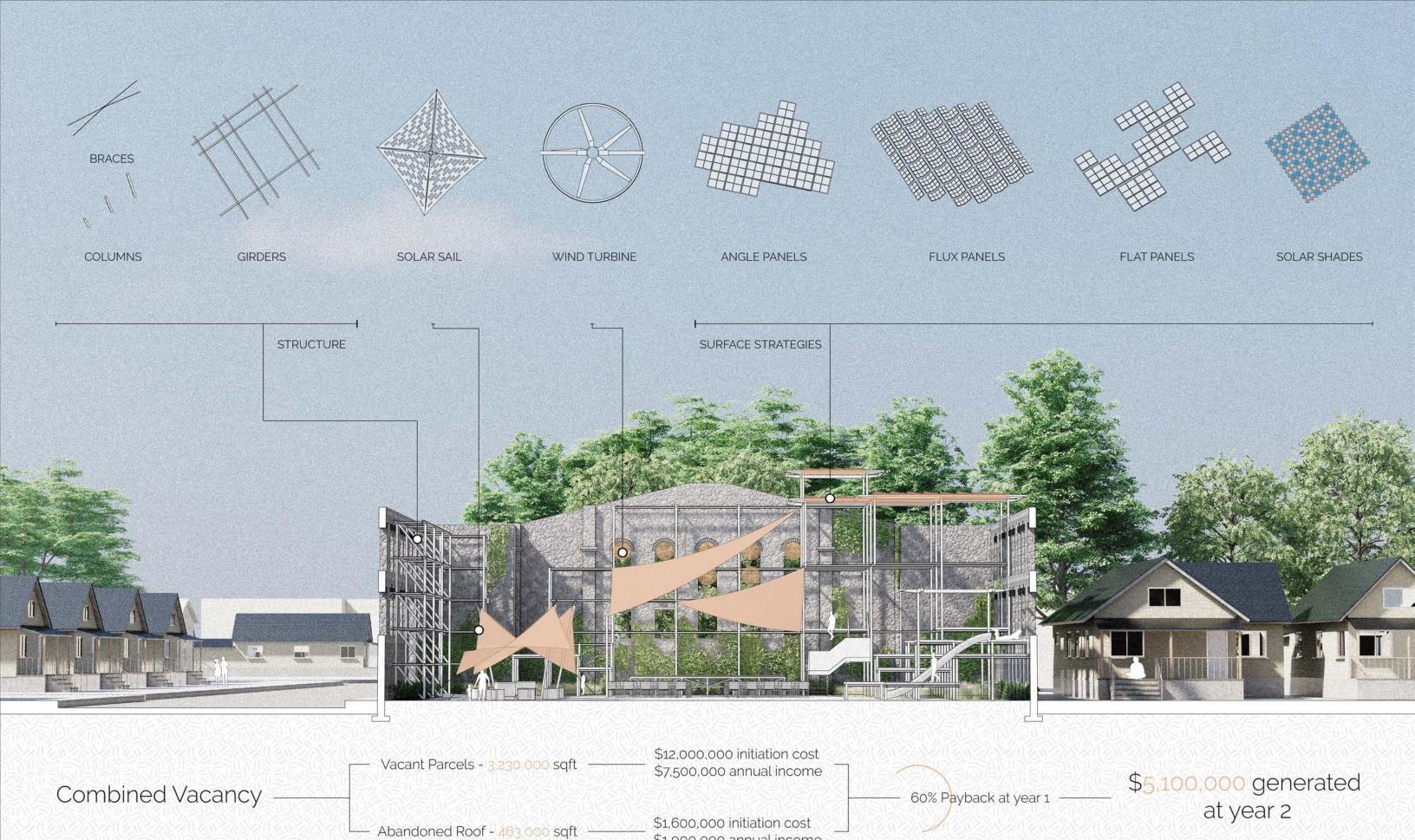






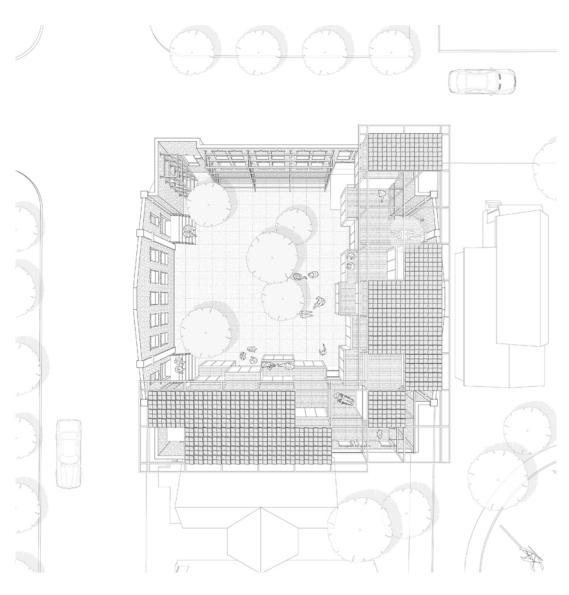
Vacancy and high levels of corporate holding has led to a reduction in resident ownership. Our policy structure will reclaim stewardship for residents, and begins with the creation of the English Avenue Community Land Trust, which will manage the purchase of vacant lots and energy production equipment. The capital for this initial purchase takes advantage of existing government funds, grants, and tax incentives.

In parallel, our structure for land reclamation will reduce non-resident ownership. A vacant property tax is combined with the introduction of temporary energy generation on lots that have remained vacant after two years of purchase. The capital is redistributed through the Land Trust to reclaim lots and invest in community infrastructure. Land reclamation and collective stewardship allows for the return of displaced residents while creating the space for the world after property.



22 DANIELA DÉU GRADUATION PORTEOLIO MSAUD 2022 COLUMBIA GSAPP 23

\$1,000,000 annual income

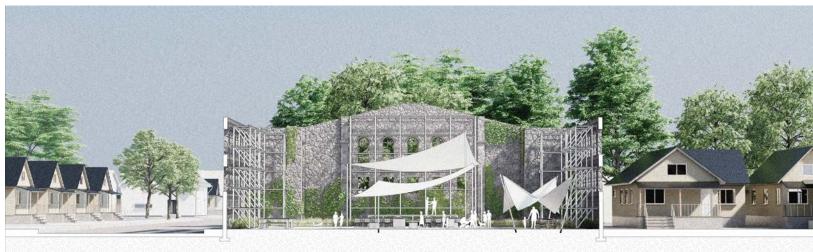


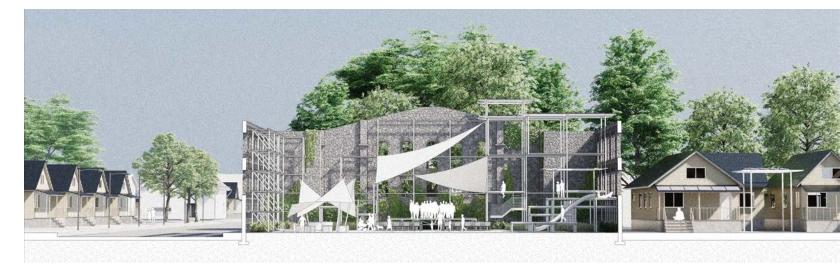
COMMUNITY ANCHOR SCALE

First Saint Mark African Methodist Episcopal Church

The ground plane of this abandoned church is actively used as a community gathering space. The modular energy producing structure can be integrated to the building to generate wealth while allowing for structured spaces to grow out of the activities that are already occurring on site. The building can continue to evolve as residents see fit.







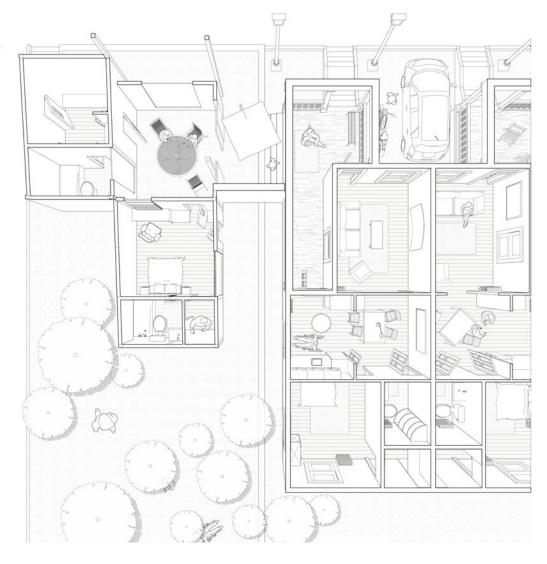








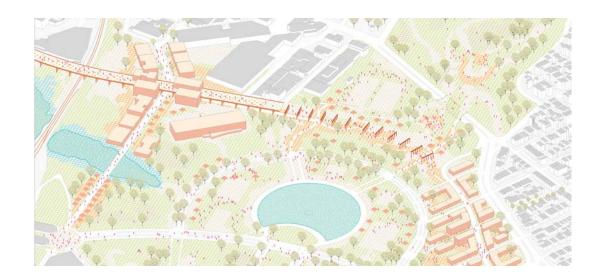




**RESIDENTIAL SCALE** 

Vacant Home

The application of the module can allow a vacant home to become habitable over time by expanding into a typology that welcomes multi-family units, provides spaces for the community, and flexible spaces that meet resident needs. As the module and land trust expands, a block's property lines are eroded.



# 03

#### REDEFINING INFRASTRUCTURE

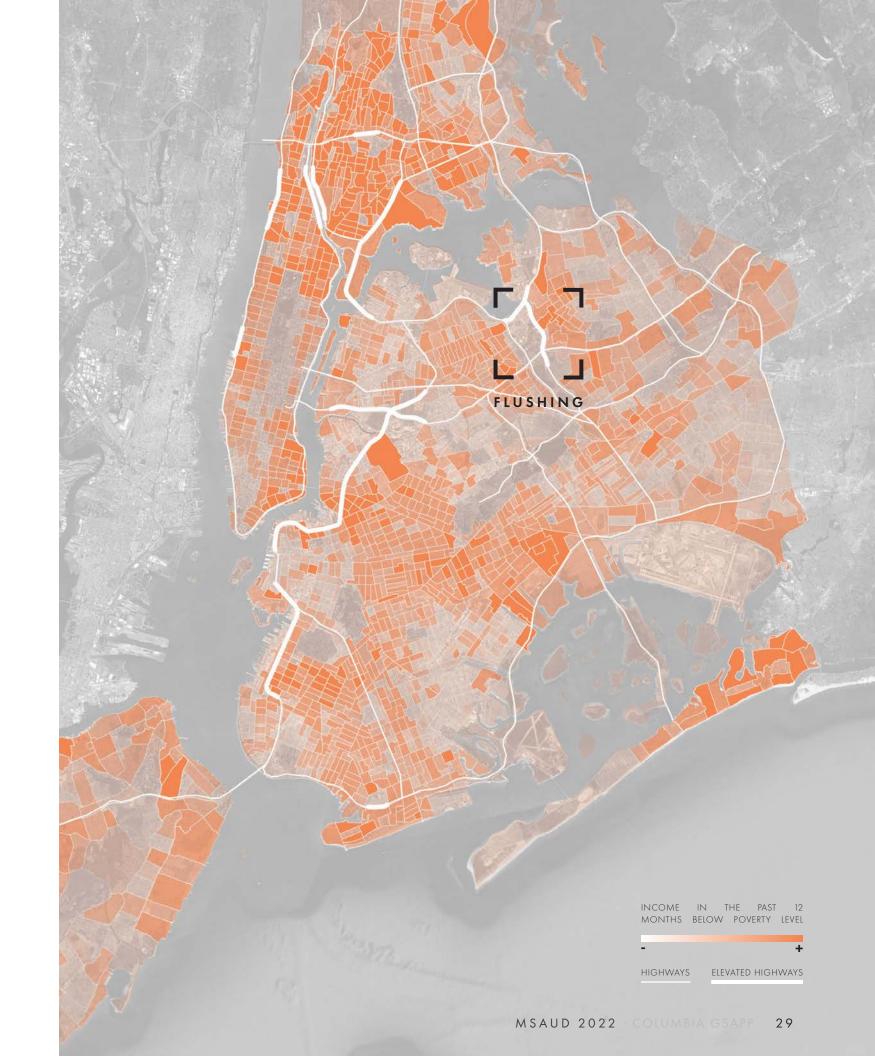
FLUSHING, NEW YORK

This proposal investigated the impact of NYC's aging elevated highways. Using the Van Wyck Expressway as a case study, our team imagined ourselves as members of a special taskforce guided by the following statement:

"DOT must acknowledge that the implementation of the highway system in urban areas "enhances the quality of life" of a privileged few, often bisecting minority neighborhoods and resulting in the concentration of pollution and poverty. As these monolithic structures are reaching the end of their structural lifespan, as a nation we are faced with the critical decision of whether we should invest in their repair or consider a new approach. By reimagining the potential for these structures to address the wrongs of the past and promote the growth of these communities in the future, we aim to remediate the urban, ecological, and social needs of the vibrant communities surrounding urban highways."

**TEAM** Howie Jiang, Achmad Maulana & Curran Zhang **FACULTY** Nans Voron, Sagi Golan, Austin Sakong, Galen Pardee

Urban Design Studio I, Summer 2021 Link to Full Set: https://indd.adobe.com/view/d45eaae6-ade6-4e5c-a58d-2cf94e5517f9



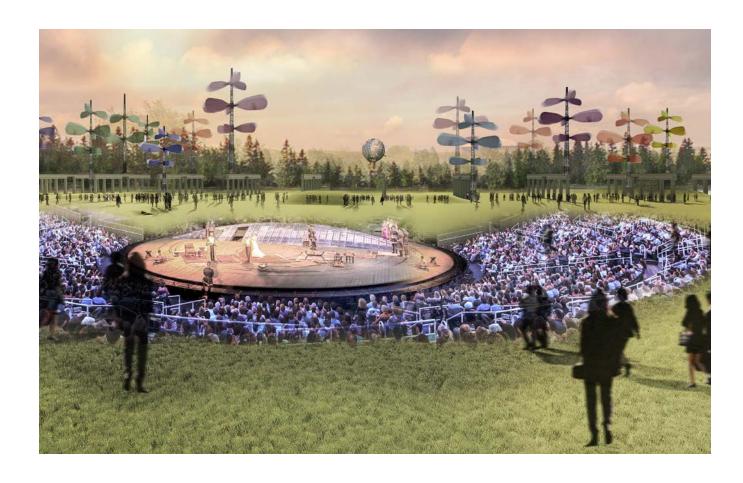


ZONE I RETROFIT

DOWNTOWN FLUSHING

Commercial Axis







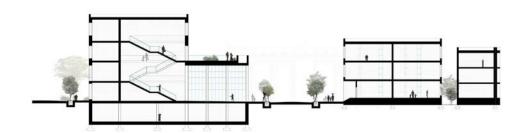


#### ZONE II REMNANT

#### FLUSHING MEADOWS CORONA PARK

Recreational & Transitional Zone

By removing the roadbed, a clear view towards Robert Moses' globe can be uncovered. The unobstructed view of the surrounding improves circulation and connectivity. The introduction of topological changes to the site helps stream circulation and promote recreational activities, while an amphitheatre acts as a public converging point and gathering space.



#### ZONE III REMOVAL

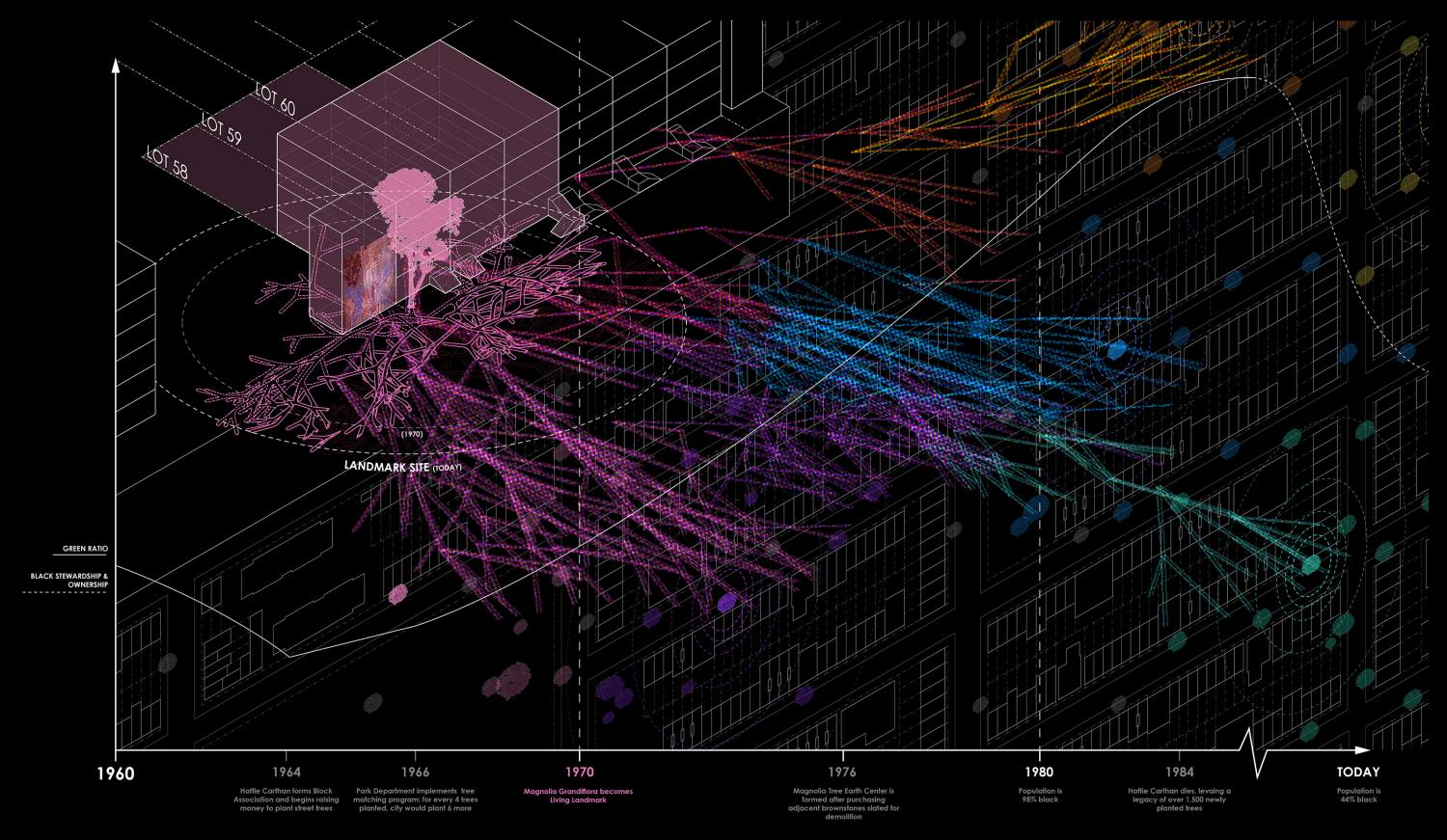
#### **QUEENSBORO HILL**

Residential Neighborhood

Removal of the damaged highway allows for the existing residential grid to extend into the park while providing much needed housing. New affordable housing and a community center as the anchor to the development zone. Paired with legislative incetives, we can proritize development patterns that meet the affordability standards needed in this neighborhood.

**04** BEDSTUY MAGNOLIA TREE

CASE STUDY





05

#### MAPPING COMMUNITY NETWORKS

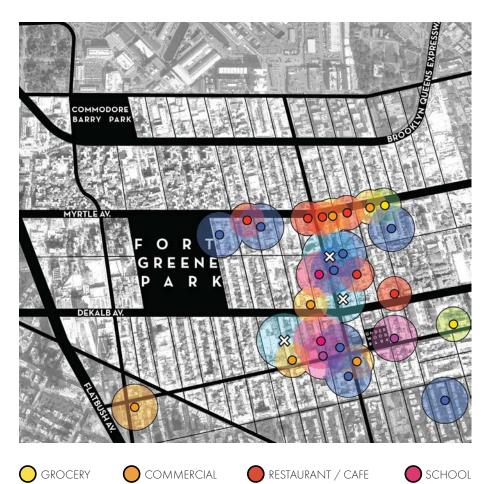
CLINTON HILL, NEW YORK

Through a series of interviews this mapping exercise explored how social relationships were geographically distributed in the Brooklyn neighborhoods of Clinton Hill and Fort Greene. It revealed that pre-gentrification, social intercations occured indoors thorugh neighborhood organizations, church groups, visiting friends at their homes or stoops, and small retail. In post-gentrifictaion, almost all social interactions occur in in transactional spaces like restaurants or shops, and can only be sustained if a resident can afford to dine out frequently. The pre gentrifictaion maps were physically visualized in a series of rendered aerial overlays to emphasize the loss of legacy resident social networks.

**FACULTY** Justin Moore

Difference & Design, Fall 2021





#### SARA: PRE-GENTRIFICATION

Sara's social network was based on a range of activities and spread throughout the neighborhood. Most of these interactions revolved around interacting daily with people in her neighborhood.



#### SARA: TODAY

Most of her old neighbors have long since moved out, and other than occasional grocery shopping, Sara's social network relies heavily on dining out.

CH OUTDOORS FRIENDS/FAMILY \$\times\$ HOME

# Miami, Mirage, Me

the city as a reflector of the self

R&R Studios, a conversation with Roberto Behar

#### Daniela Déu

(un)Modern: Ex-Centric Latin@/x Spatial Practices Professor Luis E. Carranza

Columbia GSAPP, Spring 2022

# 06 MIAMI, MIRAGE, ME PROLOGUE

"[Miami] straddles the first, second, and third worlds, (...) the capital before its time of the fourth. A present and the future world in which most city inhabitants come from somewhere else and offer each other a culture of cultures to be discovered" - R&R STUDIOS

Miami is a city of predominantly Latin immigrants. A city that bridges North America with its Latin counterpart. For the pair of Argentinian designers that founded R&R Studios, Miami was where different cultures converged; where the tension that arises between familiar and new created the fascinating "locale of [the] new life that we were to begin". Within this tension and confluence of diverse perspectives, "a new construction of the American Dream"2 can be made. An exploration that, in essence, is the creation of a genius loci, a new sense of identity for this infant city.

In a city that is merely 126 years old, R&R Studios is part of an architectural and design continuum that has helped shape our collective perception of Miami as a young tropical metropolis. The arrival of Roberto Behar and Rosario Marquardt - the two R's in R&R Studios to the city coincided with the time that Miami came to be. And as they engaged with the burgeoning city, they became part of its invention. Their work follows Miami's stratospheric rise from swampland to a glistening oceanfront skyline, and it confronts its unrestrained growth with a vision of what Miami could become.

R&R Studios is thus in the business of exploring identity - of a city, an architect, an artist, a resident, a passerby... Their work profoundly reveals their own desires, values, and aspirations, and through this transparent projection of self, they elicit self-exploration from those who engage with it.

This essay was initially conceived as an academic analysis of the work produced by R&R Studios. I sought to learn more about their design process in placemaking and creating a sense of civic identity in a uniquely Latin city like Miami. To bolster my research, Roberto Behar had agreed to speak with me for an interview.

In the excitement of catching up with an old professor, what began as a structured interview, slowly softened into a conversation that reminded me of the after-studio talks with classmates that we would have at the University of Miami's School of Architecture courtyard. The interview lasted for close to two hours

and began with a more rigorous analysis of the studio's work. It then meandered through childhood memories, Roberto's ever-present admiration for Rosario, and a deep-rooted understanding and appreciation of Miami and all it has to offer.

While I reviewed and transcribed the audio recording, the more I listened to it, the more impactful I found the portions of our conversation that initially seemed tangential. In the days after the interview, these tangents expanded into something much more complex and surprisingly personal for me.

As narrated by Roberto, his shared experiences with Rosario resonated with my own experience. They poked at questions about identity - Latin American identity that I had only recently begun questioning myself:

Leaving my home country for college made me fully assume that identity for the first time. It also made me engage with the fact that technically, by birth and those three infant years on American soil, I was also American. Miami was where my past experiences and former sense of self crashed with a familiar but distinctly foreign culture that was not quite American but not uniformly Latin. It was a city where I became a sort of USA-passport-holding immigrant. I became aware of a vaguely shared Latinidad in the United States, one that I only became cognizant of being a part of when I moved away from Miami to New York City. And so, my conversation with Roberto pushed me to reconcile - or rather, to become comfortable with the fact that I can't reconcile - the complexity of what identifying as Latina in the United States means to me and what it means in my work as a designer.

By refamiliarizing myself with R&R Studio's work, I have begun to see Rosario and Roberto as active characters in the world they are constructing: "the Fourth World of those who come from somewhere else"3. In this world, rather than acting as guides, their projects become an open invitation to take the journey alongside them, to imagine the future possibilities of the Fourth World.

And so, in this essay, we are embarking on a joint journey: that of R&R Studios and my own. This essay has become an example of what it means for one firm and one aspiring architect to be Latin in the United States - i.e., to be Latin@/x American. It was a conversation whose questions and themes might poke at your own understanding of self and bring some clarity to other fellow Latin@/x designers as it did for me.

Behar, Roberto. "Ciudad Del Mañana." Summa +no. 115, June 2011. http://www revistasummamas.com.ar/revista/115, p.4

Behar, Roberto. "Little Guatemala & the Invention of Miami." The new city 2

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