

# The Resilient City: Proposals for the Future of Mexico City

2018 McKinley Futures Studio  
College of Built Environment  
University of Washington

The Resilient City: Proposals for the Future of Mexico City · 2018 McKinley Futures Studio



**The Resilient City: Proposals for the Future of Mexico City** is the 2018 McKinley Futures Studio at the College of Built Environments at the University of Washington. The studio showcases the work of graduate and undergraduate architecture and landscape architecture / planning students in the College of Built Environments. Following a week-long travel expedition to Mexico City, and working in teams, the students were challenged to speculate about the future of Mexico City, specifically related to the themes of Water, Seismology, Infrastructure, and Inequity.



# Participants

## Students

Amy Broska - architecture  
Annalisa Castelli - architecture  
Fengyi Xu - landscape architecture  
Gabrielle Lewis - architecture  
Ilse Torres - architecture  
John Rodezno - architecture  
Kelsey Pierson - architecture  
Laura Durgerian - landscape architecture -  
urban design + planning  
Lauren Wabiszewski - architecture  
Mackinley Erickson - architecture  
Melinda Groenewegen - architecture  
Melissa Marquez - architecture  
Richard Hua - architecture  
Roxanne Glick - landscape architecture  
Sharon Fung - architecture  
Veronica Leanos - architecture  
Yang Su - architecture  
Yuansi Cai - landscape architecture

## Faculty

Jeff Hou - Professor - landscape architecture  
Robert Hutchison - Affiliate Associate Professor - architecture



## Acknowledgments

We thank Jan and David McKinley for making this studio possible through their generosity in creating the Jeanette and David McKinley Futures Endowment and for inspiring futures dialogues at the College. In the College of Built Environments, we would like to express our gratitude to John Schaufelberger, Dean of the College; Ken Yocom, Associate Professor and Chair of the Department of Landscape Architecture; Brian McLaren, Associate Professor and Chair of the Department of Architecture; and Edgar Gonzales, Assistant Dean for Advancement and External Relations, for their support. Special thanks go out to Jim Suehiro and Professor Gregory Hicks for their in-depth involvement in the studio.

This studio would not have been possible without the support of many professionals and academics who contributed their time, research, expertise and own speculations about future trends specifically related to Mexico City, and the future of cities in general. Their generosity greatly enhanced the knowledge, experience and ultimately the work of the students.

We wish to thank the following individuals and organizations for making our brief trip to Mexico City so fulfilling: Victor Alcerreca, Architect & Professor at CENTRO and Universidad Iberoamericana; Eduardo Basurto, Architect & Professor at Universidad Autonoma Metropolitana Xochimilco; Luis Beltran del Rio Garcia, Architect; Tatiana Bilbao, Principal, Tatiana Bilbao Estudio; Felix Sanchez, Principal, Felix Sanchez Arquitectos; Javier Sanchez, Principal, Javier Sanchez Arquitectos; Museo Casa Barragan; Museo de la Ciudad de Mexico; Diego Ricalde, Principal, MMX Arquitectos; Mario Schjetnan, Principal, Grupo de Diseño Urbano, and Paloma Vera, Principal at Cano+Vera Arquitectos.

We are also indebted to the following guests for their valuable insight and contributions during our studio reviews and in-studio discussions: Ruth Baleiko, Partner, The Miller/Hull Partnership; Sarah Bergmann, Designer; Kristi Cherie, Associate Professor, Landscape Architecture, Knowlton School, Ohio State University; Gina Ford, Principal, Agency Landscape & Planning, Cambridge MA; Brian Gerich, Project Architect, Mahlum Architects; Gregory Hicks, Professor of Law, UW School of Law; John Komorita, Engineering Unit Manager, King County Wastewater Treatment Division; Jill Fortuna, Senior Associate, Gustafson Guthrie Nichol; Mark Johnson, Principal, Signal Architecture + Research; Cory Mattheis, Associate, The Miller/Hull Partnership; David Miller, Founding Partner, The Miller/Hull Partnership; Keith McPeters, Principal, Gustafson Guthrie Nichol; Rick Mohler, Associate Professor, UW Department of Architecture; Julie Parrett, Senior Lecturer, UW Department of Landscape Architecture; Gundula Proksch, Associate Professor, UW Department of Architecture; Irma Ramirez, Professor, CalPoly Pomona Department of Architecture; Felix Sanchez,

Principal, Felix Sanchez Arquitectos; Javier Sanchez, Principal, Javier Sanchez Arquitectos; James Suehiro, Principal, Suehiro Architecture; Barbara Swift, Principal, The Swift Company; Ken Yocom, Associate Professor & Department Chair, UW Department of Landscape Architecture.

We were honored to be invited by Tatiana Bilbao to include our studio work as part of her 'Two Sides of the Border' exhibition at Yale University's School of Architecture, from November 29th 2018 to February 9th 2019. Additional thanks to Nile Greenberg, Designer of the Exhibition, and Photographer Iwan Baan, who contributed photographs of our Mexico City sites for the exhibition. Special thanks to our student Sharon Fung for designing and assembling the contents for this book publication.

Lastly, we thank the students for their dedication, risk-taking and hard work across the quarter. Their energy and imaginations are apparent in the work they produced and the futures they envision.

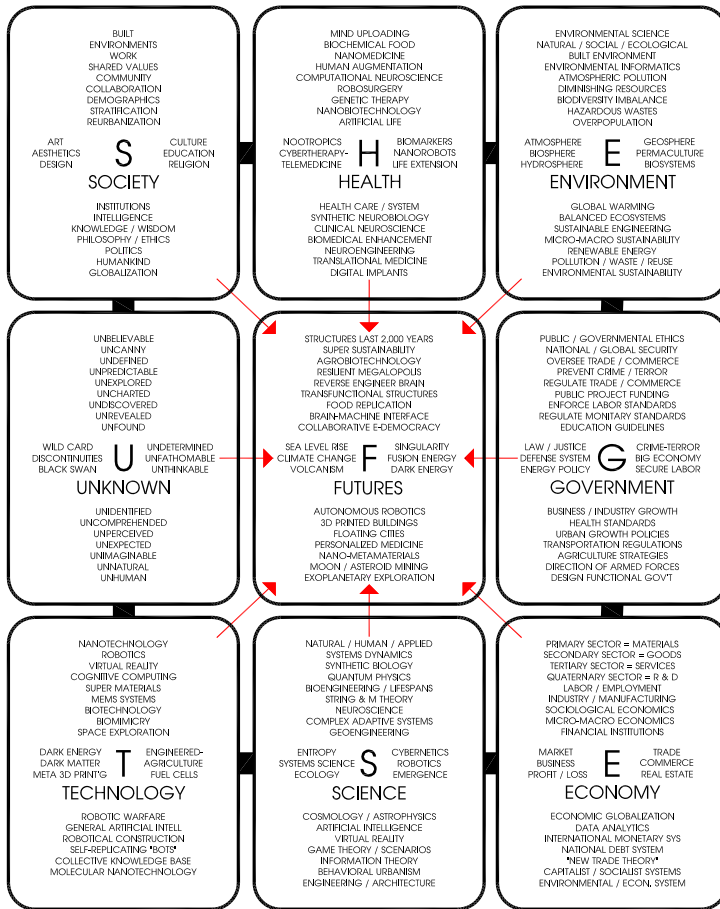
# The Jeanette and David McKinley Endowment for the Design of Future Architectural Environments

Each spring, through the generosity of David and Jan McKinley, two CBE faculty members co-host a design studio dedicated to a specific region or topic related to the future. Students are tasked with producing projects that generate research-based hypothetical design scenarios and are challenged to consider larger problems facing society -- health, the environment, the economy, science, and technology. This intensive quarter requires students to consult with, and be critiqued by, experts outside of the design fields—lawyers, environmental experts, healthcare providers, and business leaders. They use the perspectives and feedback to develop potential solutions, and present their findings and proposals at a midterm and end of term critique. Learning objectives include: 1) Exploring frameworks and approaches of futuristic thinking; 2) Cultivating critical understanding and knowledge of the urban environment and its systems – based on observation, analysis, and existing resources; 3) Developing abilities for multi-scalar design thinking; and 4) Developing skills for interdisciplinary collaboration and team work.

David McKinley, FAIA, graduated from the College of Built Environments in 1953. At the time, he was already thinking of the future, what it will look like, how people will move around, and where food will come from. An instrumental architect involved in constructing many Seattle's icons including the UW's Red Square and buildings for the 1962 Seattle World's Fair—David sought to ensure that the College continued producing visionary and bold built environment professionals. Together with his wife Jan, they established the Jeanette and David McKinley Endowment for the Design of Future Architectural Environments.

The Resilient City: Proposals for the Future of Mexico City is the fifth McKinley Futures Studio offered at the College of Built Environments. Earlier studios focused on topics as diverse as "Restructuring for the Future City", "Cities on Water" and "Smart Cities and Urban Productivity". Although the topics change, the theme of the urban futures and the interdisciplinary nature of the studio does not. Through David and Jan's generosity and vision, the next generations of designers have the opportunity to learn without limits and discover how built environment professionals can impact the world.





Transformative Trends and Systems Shaping the Future of our Global Environments:

SHEGESTU diagram created by David McKinley

# The Resilient City: Proposals for the Future of Mexico City

*“What will designers need to think about in 20, 50, or 100 years? How will society, business, law, the economy, the environment, etc. be different and how will they influence design?”*

*- McKinley Futures Studio Call for Proposals*

The 2018 Futures Studio challenged students to propose and develop speculative projects which address the future of Mexico City. Why Mexico City? One of the world’s largest metropolises, Mexico City is located in the high Valley of Mexico in the center of the country, originally built on an island in Lake Texcoco by the Aztecs in 1325. Following the Spanish conquest in 1521, the city was rebuilt in accordance with the Spanish urban standards on the foundations of the original Aztec city. Today,

the Greater Mexico City population is estimated to be between 21 million and 23 million people. While blessed with a rich cultural and architectural history and a comfortable subtropical highland climate, the city faces major infrastructural scarcities in transportation, water supply, and affordable housing; and its enormous scale poses environmental, energy, and public health problems, the result of pollution, carbon emissions, and sprawl. It is a city that is constantly in flux, building, rebuilding, and unbuilding itself, through both formal and informal ways. The extreme, at times seemingly unreal, urban characteristics of Mexico City make it the ideal venue for students to explore the design of the future city.



Our original proposal for the studio combined Hutchison and Hou's interest in vacant urban land and abandoned structures (Hutchison) with urban commons, public space, and environmental justice (Hou). We proposed that students develop speculative projects which address how urban vacant land and abandoned structures might be utilized on a temporary and/or permanent basis to encourage greater density, improve human health, and serve as infrastructure for the city. Of course, important to our proposal was that we be able to visit Mexico City with all of our students. And so the studio commenced with a one-week long site visit to Mexico City during Spring Break before Spring quarter, during which students and faculty walked and traversed the City each day, visiting five of the

sixteen delegaciones (boroughs) and numerous colonias (neighborhoods) within. Their walks were complemented by office visits and talks with several local designers and professors, including Victor Alcerreca, Tatiana Bilbao, Diego Ricalde, Javier Sanchez, Felix Sanchez, Mario Schjetnan, and Paloma Vera. What quickly became clear to both the faculty and the students was that for a studio based on the premise of the future, the topic of abandoned land and structures seemed too specific. Rather than seeking out specific sites or locations for intervention, we decided to use our short time in Mexico City simply to look at the city with as wide of a perspective as possible, and to suspend discussing sites and issues to address until our return to Seattle.



Following our return from Mexico City, and using Felipe Correa and Carlos Garcíavelez Alfaro's documentation of Mexico City entitled 'Mexico City: Between Geometry and Geography' as a source, students spent two weeks working in groups assembling and analyzing existing data to help form a greater understanding of the issues at hand, and to formulate studio manifestos to guide speculative proposals. During these two weeks, four primary issues were identified as critical for consideration of the future of Mexico City:

1. Water: Stormwater & Sewage, Water Supply, Water Treatment
2. Seismology: Geological, Relationship to City, Relationship to Building Typology, Relationship to Population/Demographics
3. Infrastructure: Public Transit, Street Use (Traffic & Pedestrian), Land Use, Technology, Open Spaces
4. Inequity: Education, Financial, Gender, Racial/ethnic, Political Representation and Participation

Considering the above four critical issues, the faculty asked the students to envision a Mexico City in 2070 using the following assumptions and future scenarios:

1. Water: The City's groundwater will have been completely depleted. Governmental mandates have resulted in the requirement for the valley to return to a closed system. The old water and sewer lines that brought fresh water into the valley and delivered sewage out of the valley have been shut down.
2. Seismology: A 9.0+ earthquake will have occurred, resulting in the largescale collapse of many structures located throughout the downtown area of Mexico City within the boundaries of the original lake shoreline.
3. Infrastructure: Due to crippling air pollution, all CO2 emission vehicles have been banned from the City. Also, the 9.0+ earthquake has completely leveled the above-ground periferico structure that formerly encircled the city.
4. Inequality: The growing inequality of the city and the ineffectiveness of the political structure to address the divide has led to widespread revolts resulting in the emergence of self-governing bodies that represent specific colonias and delegaciones and further development of new political and social frameworks for the metropolitan area.

The above scenarios conjure up a dystopian vision for Mexico City in 2070. Yet, within each scenario, (and all four scenarios as a whole), there also exists the opportunity for thinking about how the City could represent a utopian condition. Students were asked to regroup into groups of three based on their relative interests in each of the above issues. Each student group was challenged as a design team to consider how Mexico City might address the above scenarios as an opportunity; how the City might be renovated, restored, reconsidered, rebuilt, and redesigned to accommodate the issues of water, seismology, infrastructure, and inequity, ultimately contributing towards a city of resiliency. Groups were encouraged to think of their project at two scales: the scale of Mexico City as a whole, and the scale of a more specific area of Mexico City, such as a colonia.

The group names, student names, and the locations of their investigation in the city were as follows:

**The Blue Ring:** Roxanne Glick, Yang Su, Kelsey Pierson (Periferico Mexico)

**Centros:** Fengyi Xu, Melinda Groenewegen, Amy Broska (Itzacalco)

**AeroEspina:** Laura Durgerian, Mackinley Erickson, Sharon Fung (Neza York)

**Cirquito Agua:** Yuansi Cai, Annalisa Castelli, Richard Hua (Grand Canal del Desague + Sistema del Sur)

**PoroCITY:** Lauren Wabiszewski, Ilse Torres, Melissa Marquez (Chalco)

**Architecture on Revolution:** John Rodezno, Veronica Leanos, Gabrielle Lewis (Santa Fe)







## AeroEspina

Laura Durgerian  
Mackinley Erickson  
Sharon Fung

## The Blue Ring

Roxanne Glick  
Kelsey Pierson  
Yang Su



## Cirquito Agua

Annalisa Castelli  
Yuansi Cai  
Richard Hua

## PoroCITY

Melissa Marquez  
Ilse Torres  
Lauren Wabiszewski



## Centros

Amy Broska  
Melinda Groenewegen  
Fengyi Xu



## Architecture on Revolution

Veronica Leanos  
Gabrielle Lewis  
John Rodezno

# AeroEspina

Laura Durgerian, Mackinley Erickson, Sharon Fung

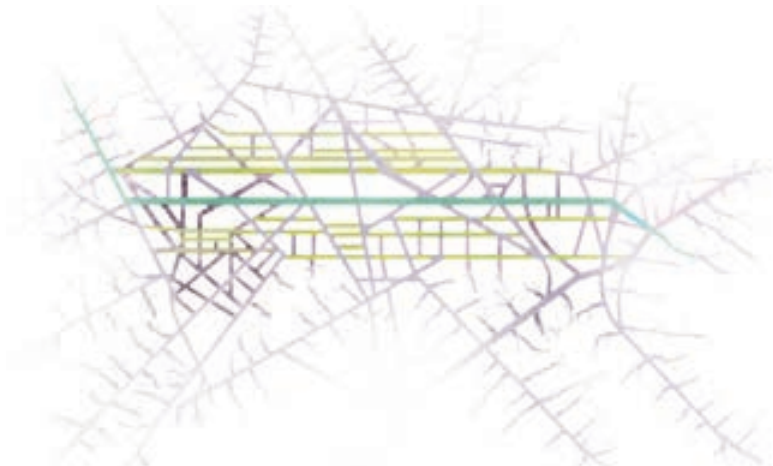
Recognizing the potential of settling ground and urban density to catalyze a vibrant mixed-life system, AeroEspina envisions Mexico City's sinking airport site as the gateway to a new urban ecology.



Growing Aeroespina: existing runways as scaffolding; test plots as a mosaic of public lands; contextual mesh

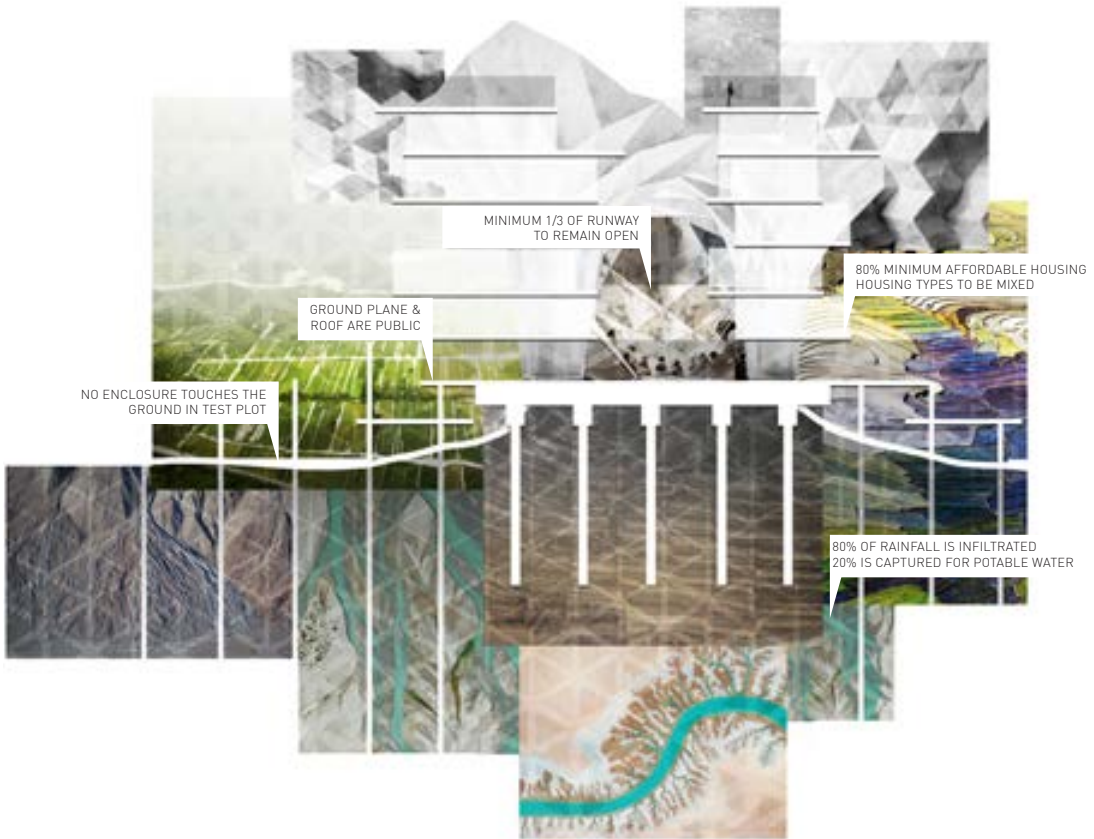






Growing Aeroespina: existing runways as scaffolding; test plots as a mosaic of public lands; contextual mesh

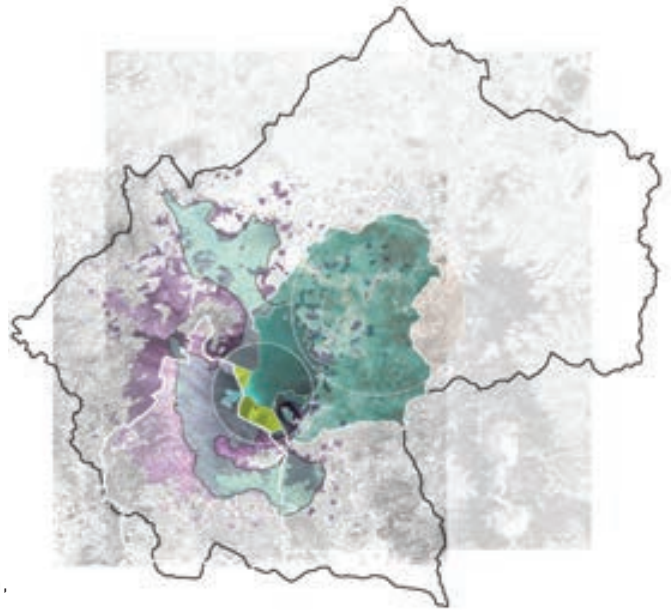




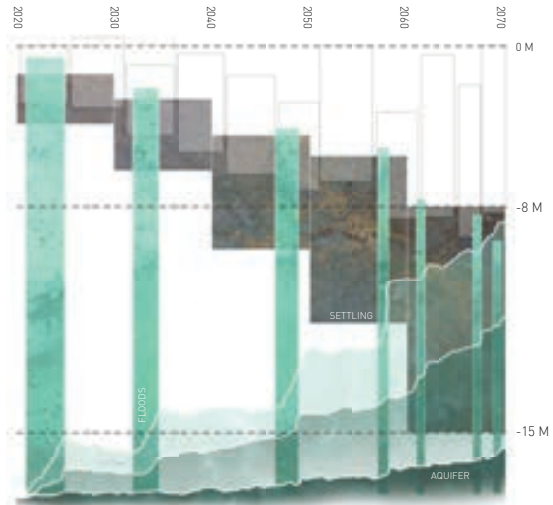
The rules: preserving a place for cohabitation

# AeroEspina

Built in the footprint of former Lake Texcoco, Mexico City's gateway – the Benito Juárez Airport – sinks as the city's aquifer is drained to support over 20 million inhabitants. With the airport vacated for firmer ground, we look to the potential energy of settling ground, and the byproducts of dense humanity – ingenuity, agency, and energy – to catalyze an innovative mixed-life system. Densifying within existing runways, and using the cells between as public lands and test plots, we layer research, education, commerce, transit, recreation, housing, water collection, public life and shared resources to grow a flexible, living and learning organism that provides a resource to surrounding lower-income communities, particularly those displaced by disaster.



Conceptualizing 4-dimensional design space



“We’re sinking and we’re shaking”

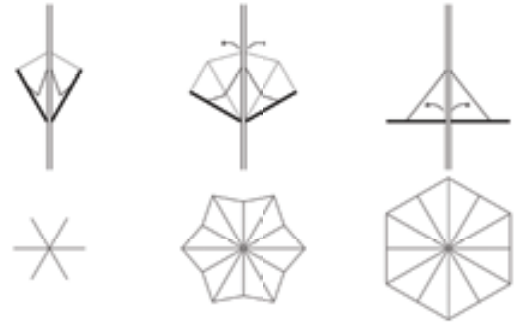
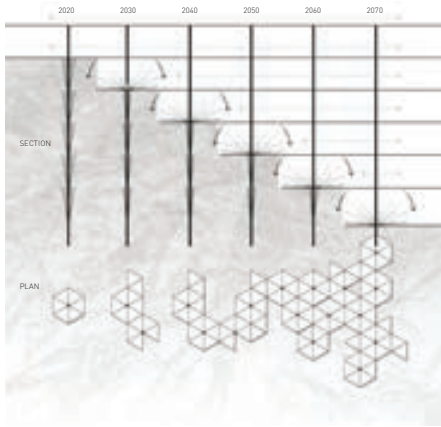
– Tatiana Bilbao



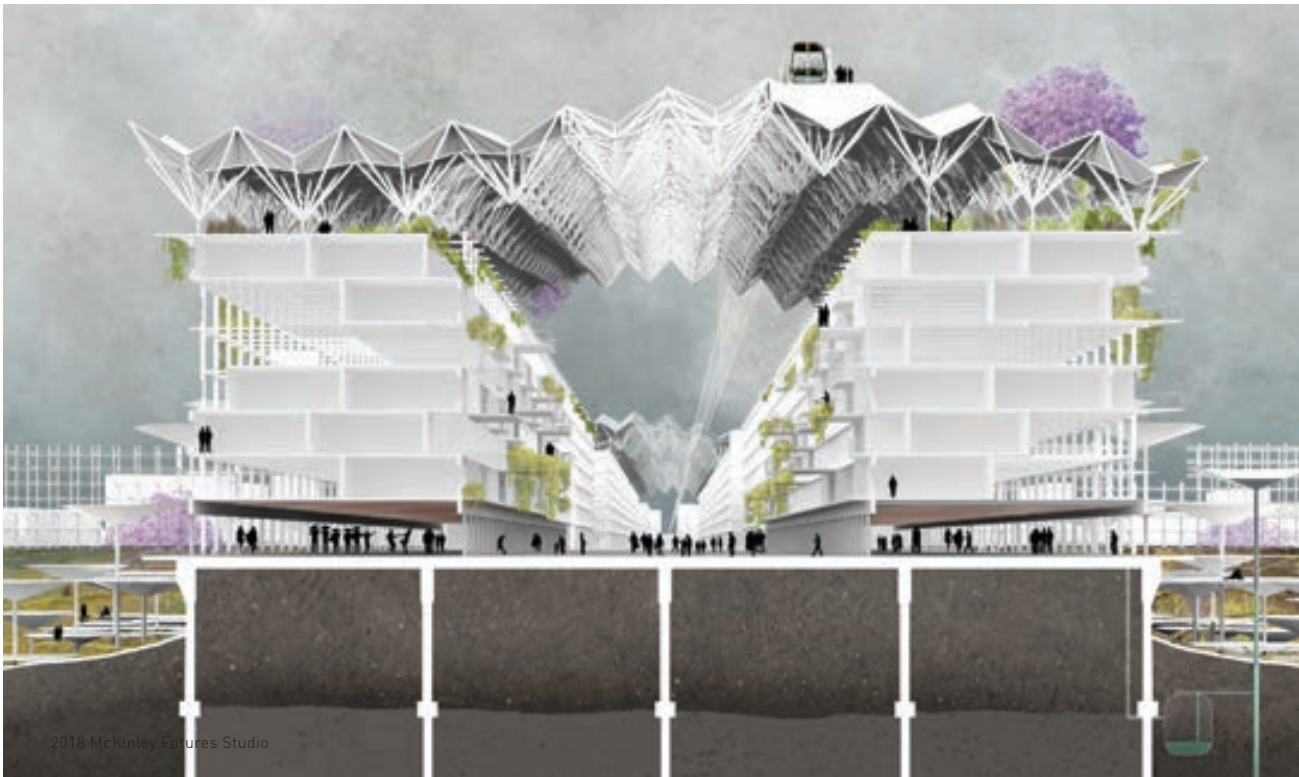
The roof as a public good



The ground as a mixed-life public space



Umbrella mechanism





## Settling as sinking

Engage the site's sinking identity and reframe as the emergence of a new volume of vertical space

## Settling as reclaiming cultural heritage and pride post-colonization

Revive Aztec King Nezahualcoyotl's legacy of water, art and scholarship to empower communities to overcome a history of conquest and oppression

## Settling as making home

Nurture feelings of certainty and comfort by making housing a right. In doing so, we shape a future where the roof is a public good, and regardless of individual means, all can feel safe, comfortable and certain within the shelter of their homes and the company of their neighbors.

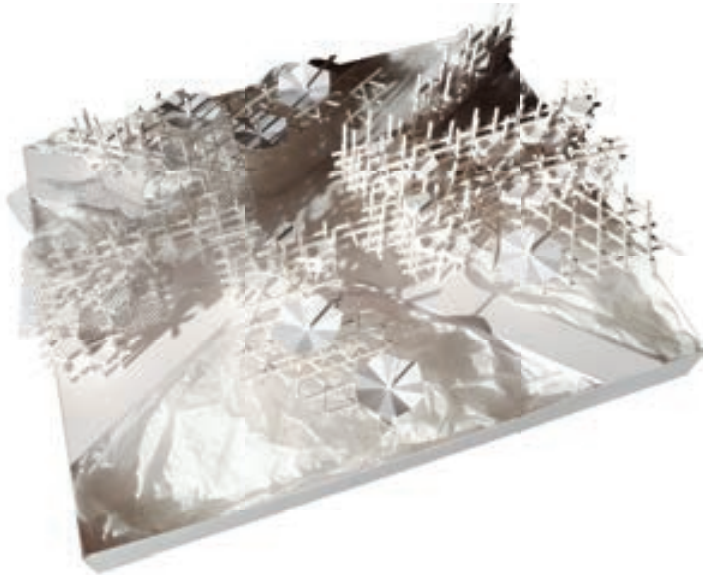


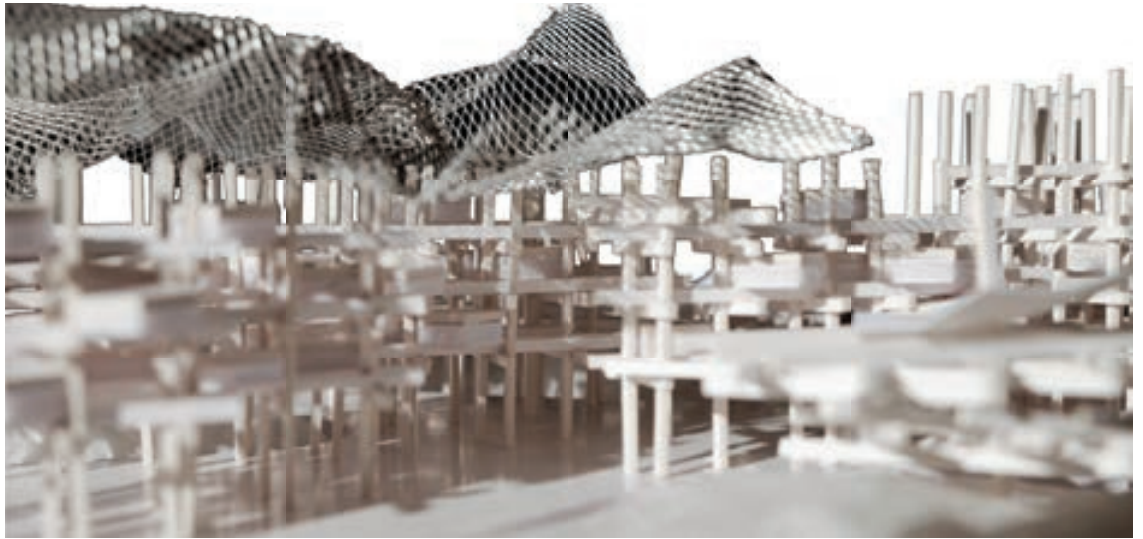
The runway as a living spine

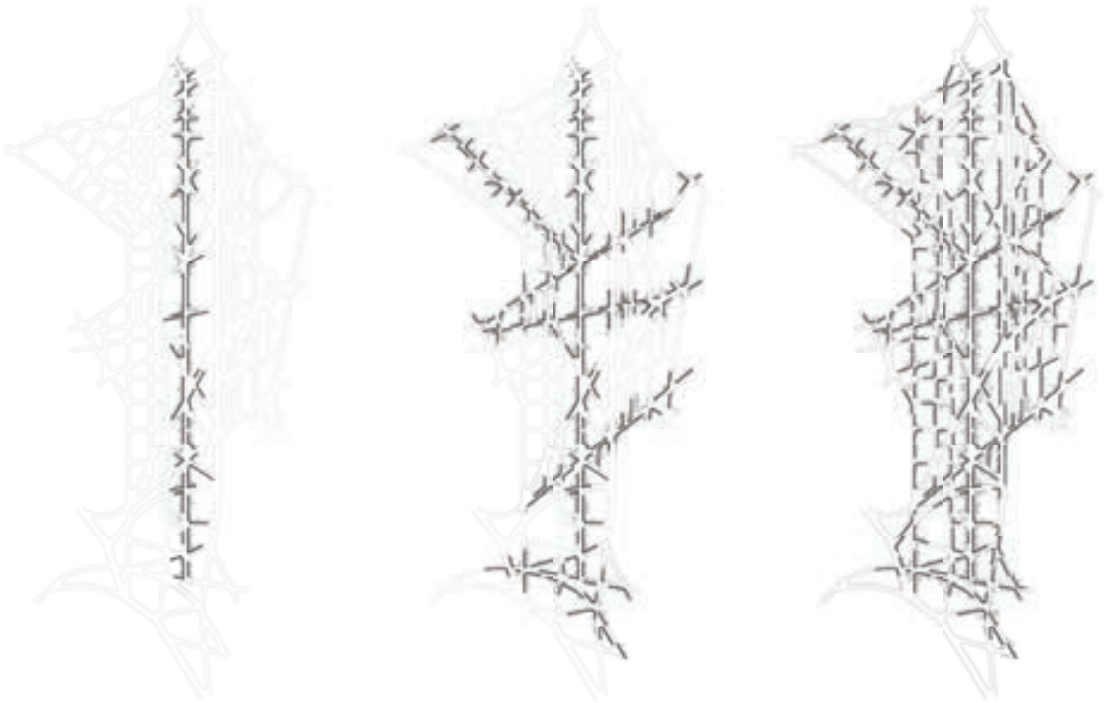


Unfolding iterations



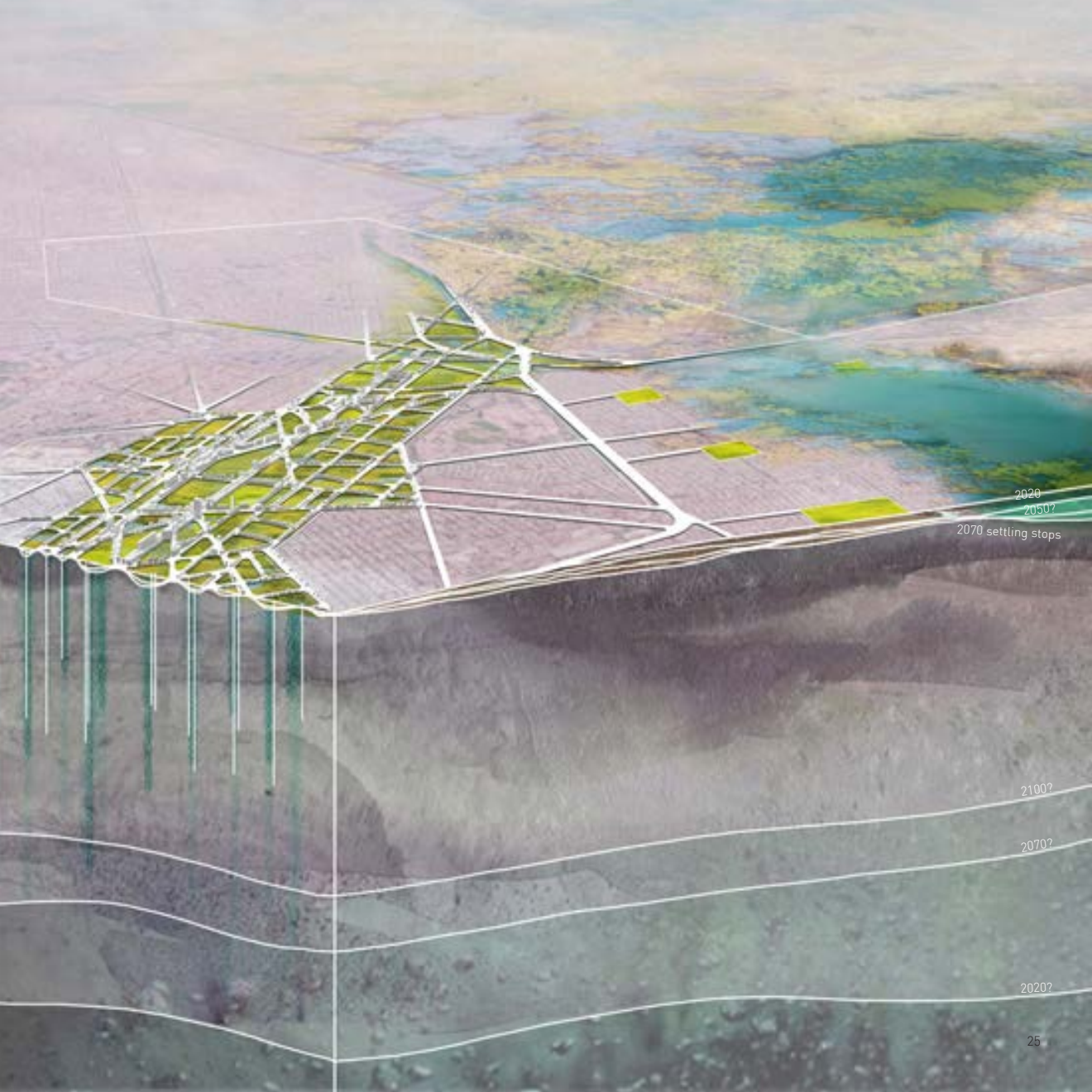






“If we could build an infrastructure to pump water up and pump water out, why can’t we build an infrastructure that keeps water in?”

– *Javier Sanchez*



2026  
2030

2070 settling stops

2100

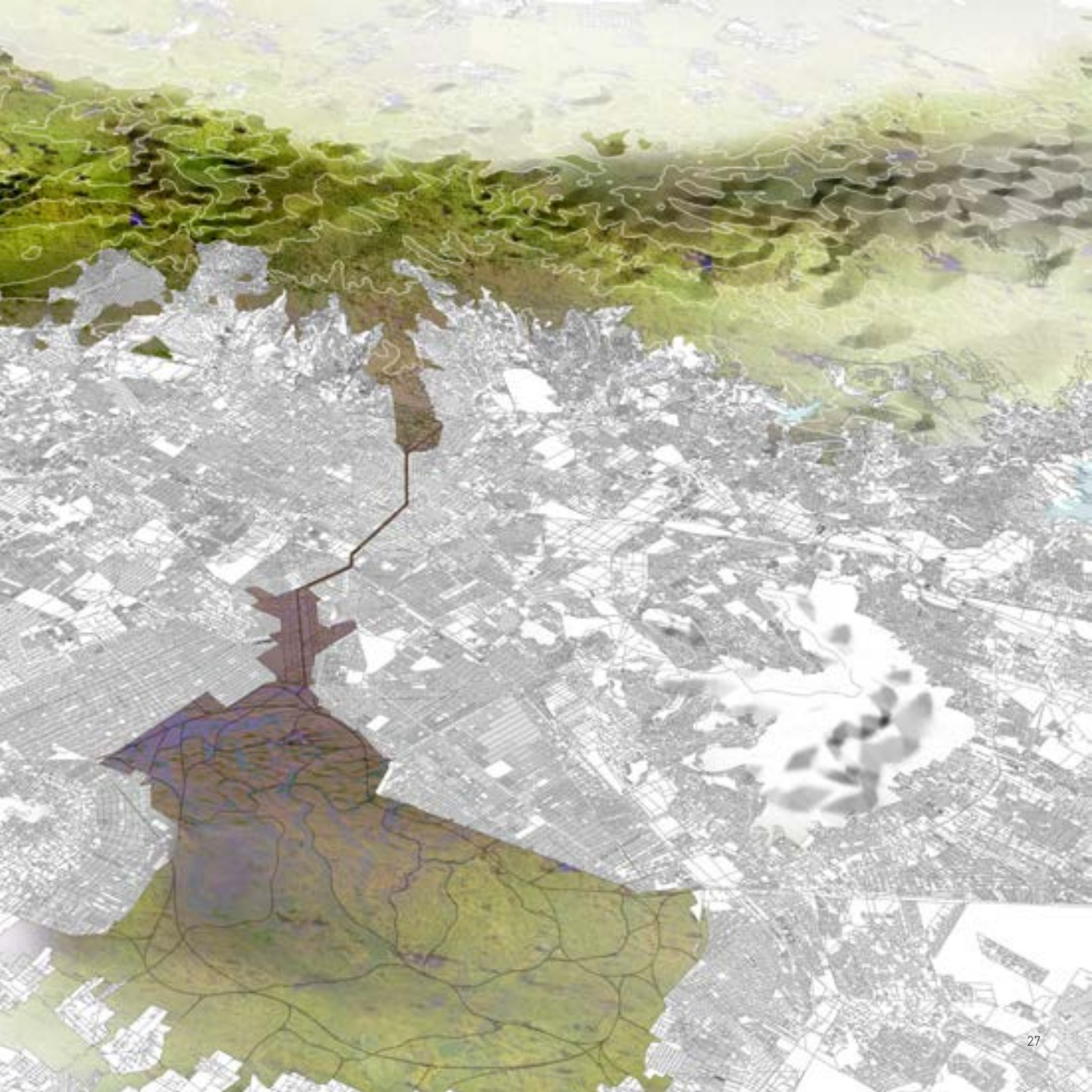
2070

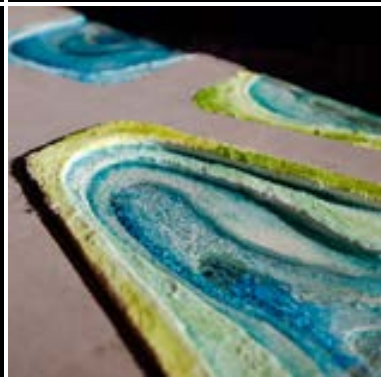
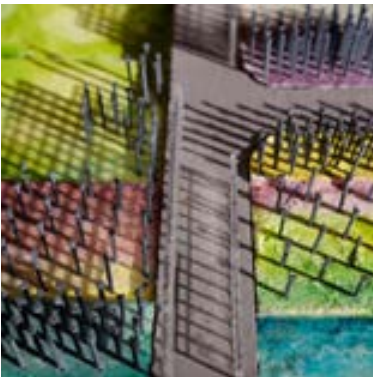
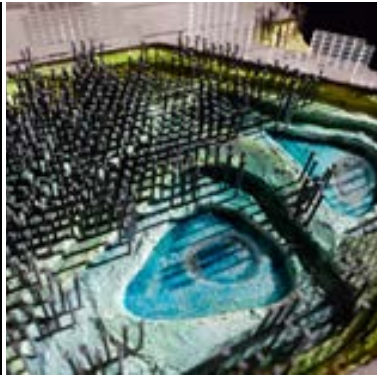
2020



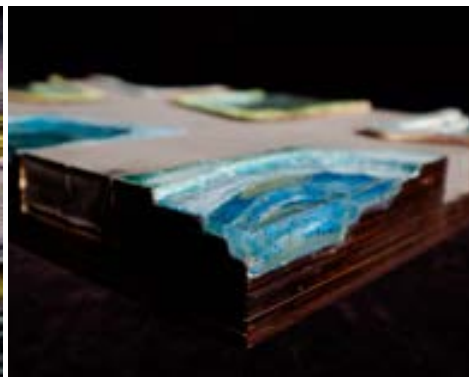
As the runways point to the city's center, there is opportunity for an equitable east-west connection, bringing the city's history - the Zócalo, Paseo de la Reforma, and Chapultepec Park, in conversation with its future dynamic urban ecology.









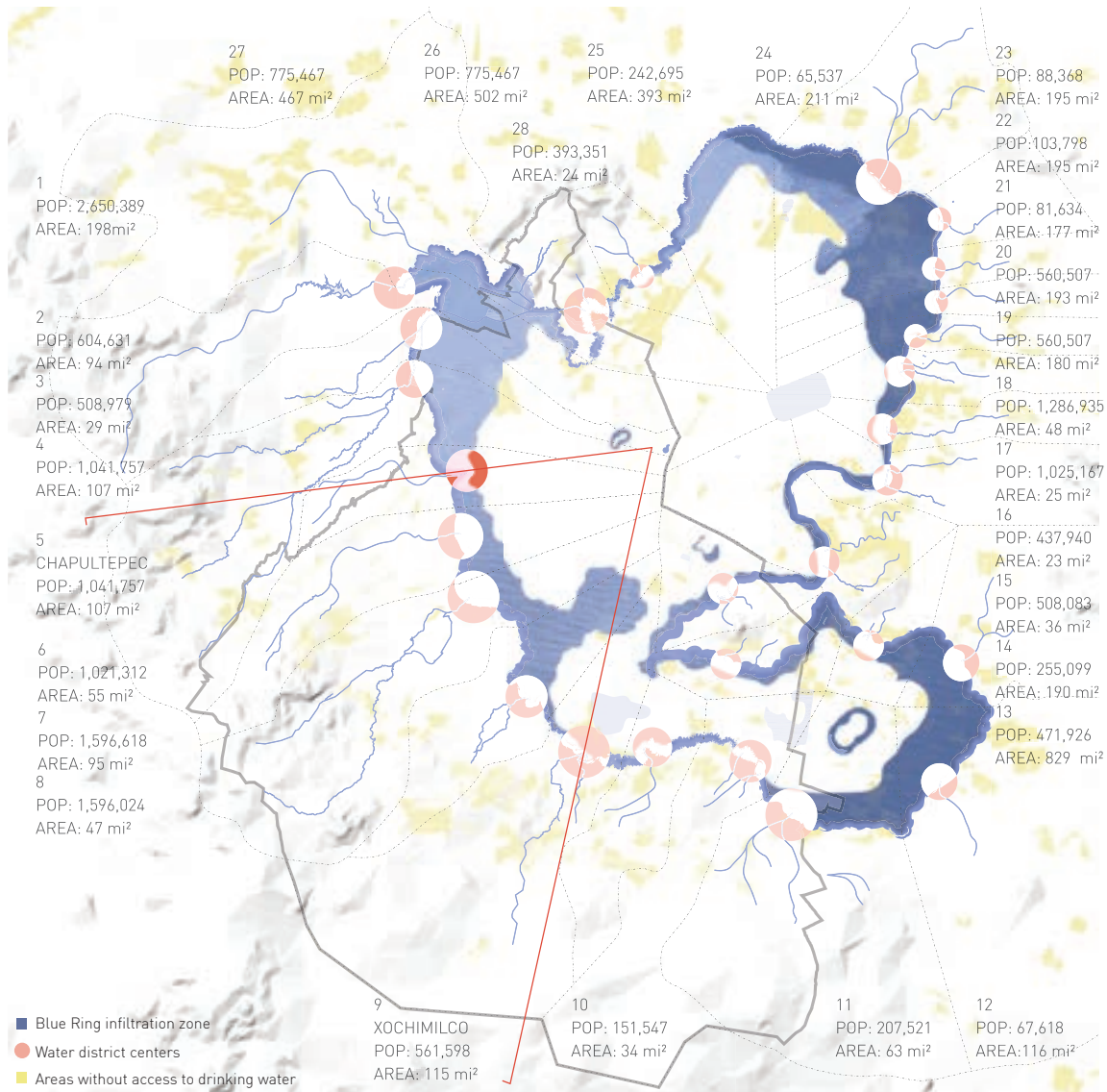




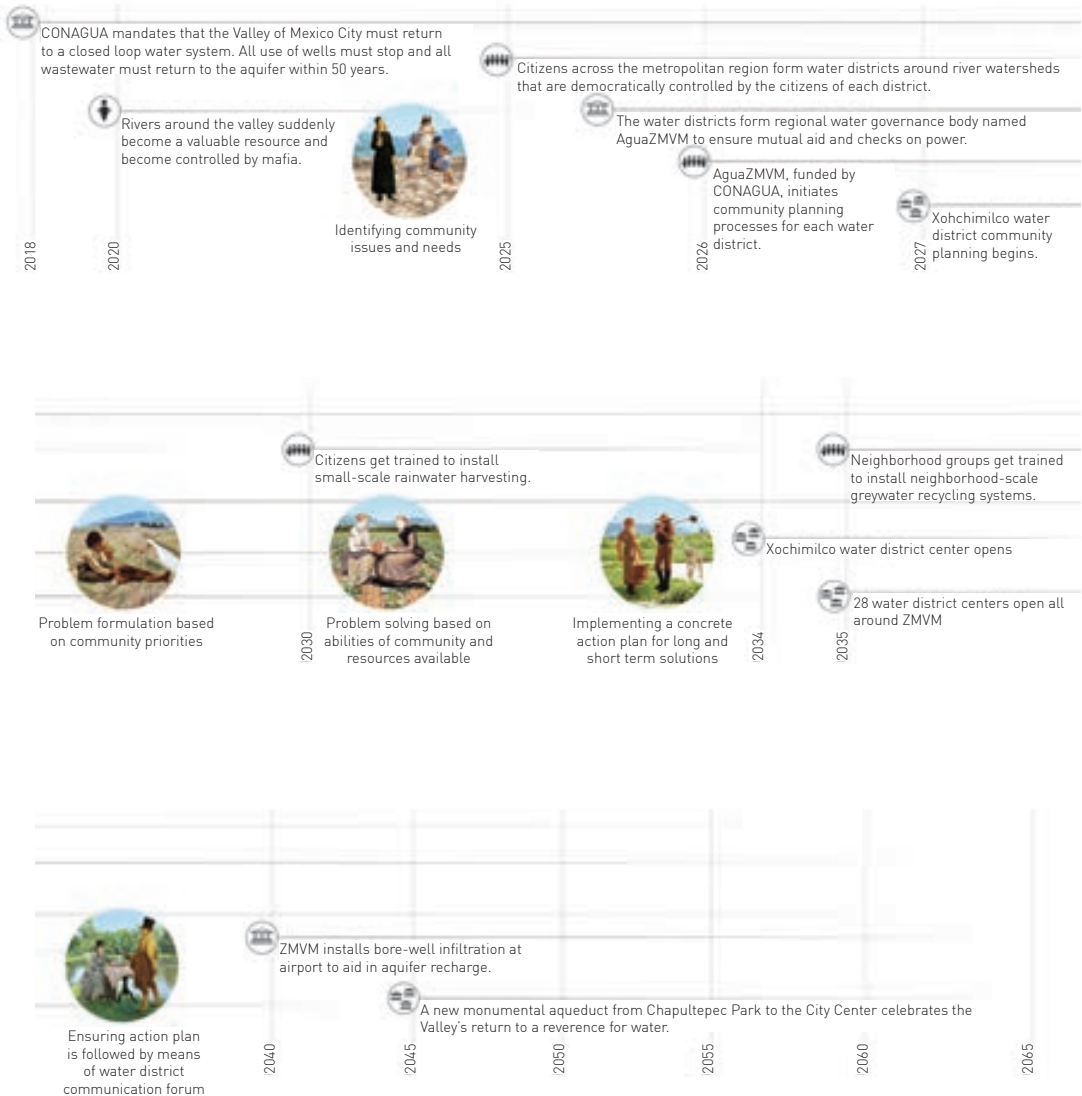
## The Blue Ring: Claiming Water Sanctuary

Roxanne Glick, Kelsey Pierson, Yang Su

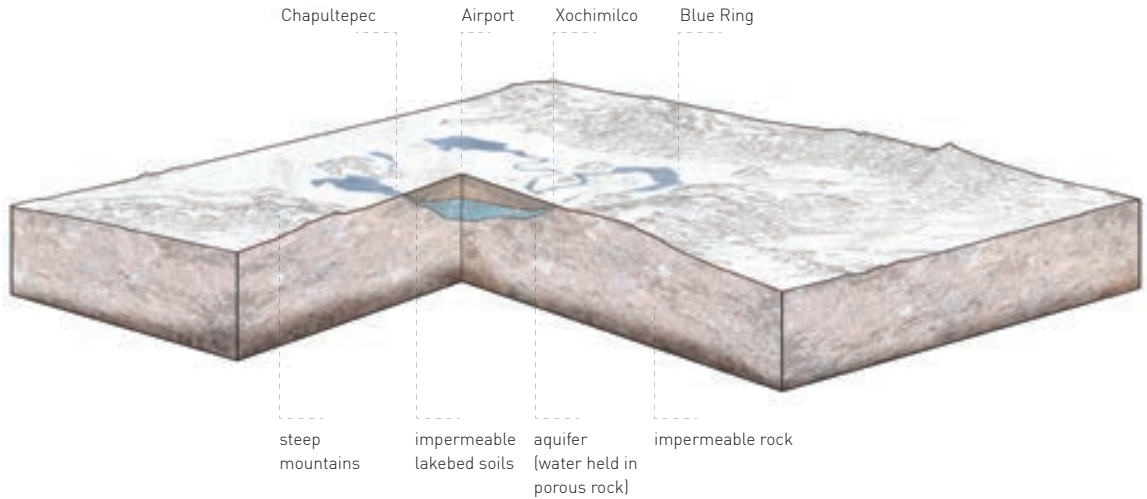
Beneath an ancient lakebed lies Mexico City's main source of potable water. Due to high demand, this source is being depleted faster than it can be replenished. The ghost of the lake leaves behind a trace by means of a highly infiltrative loop along its perimeter that hydrates the aquifer below, designated "The Blue Ring". While the city's wealthy reside on the ancient lakebed with the most infrastructure to water, the poorest communities remain on the outskirts without means of access. Ironically, these are the very communities that sit along The Blue Ring. This project aims to empower these impoverished people as guardians of this valuable land that serves the whole city.



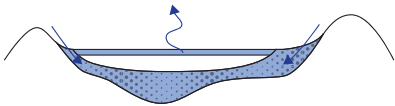
# Narrative



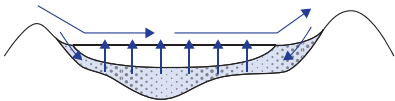
## Geological Transect



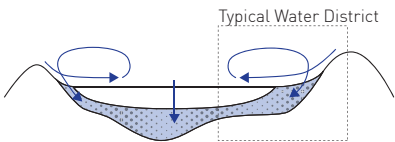
## Water Cycle



pre-hispanic water cycle - endoheric basin

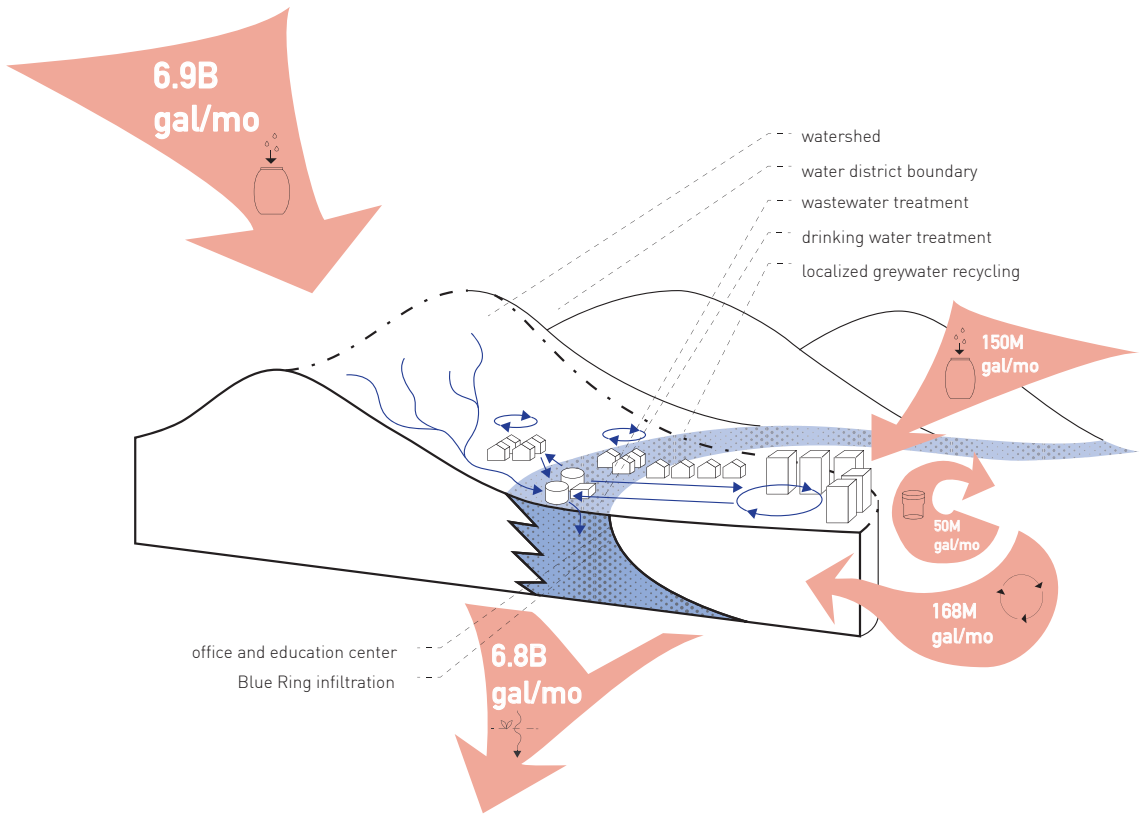


current water cycle - engineered extractive, wasteful system





future water cycle - engineered closed loop system

# Xochimilco Water District Water System Diagram




# Regional Zones


**Aqueduct**  
  
*Raised conveyance*


**Community Center**  
  
*Distributed catchment + central treatment*


**At Home Treatment**  
  
*Dispersed treatment + conveyance*


**Blue Streets**  
  
*Urban localized treatment + dispersed infiltration*


**Plot**  
  
*Urban localized treatment + infiltration*


**Porous Platform**  
  
*Urban distributed treatment + infiltration*


**Platforms**  
  
*Dispersed treatment + infiltration*

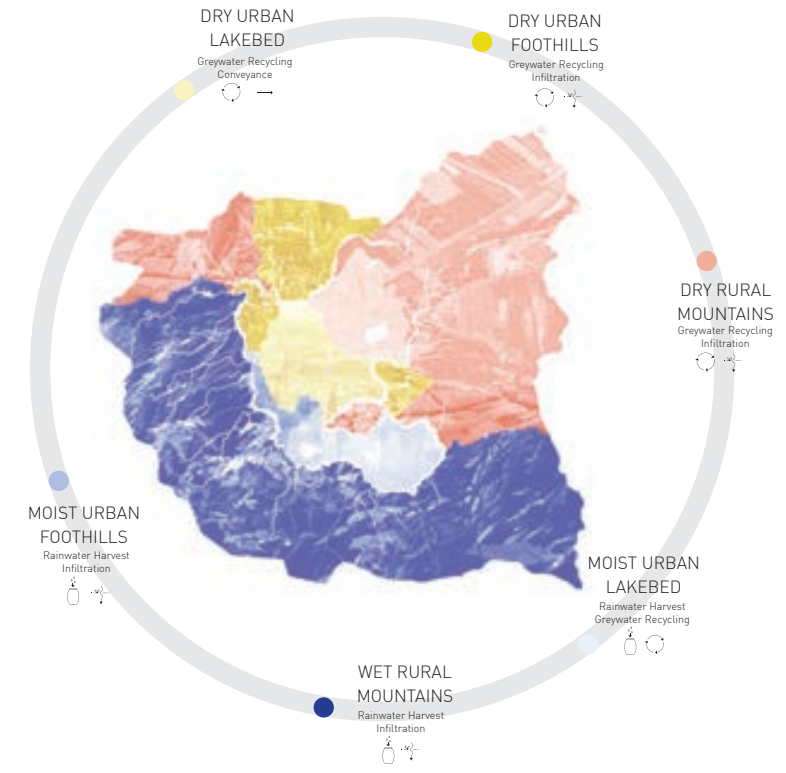
**Backyard to Basement**  
  
*Urban dispersed treatment + infiltration*

**Theater**  
  
*Multipurpose urban infiltration*

**Stacked**  
  
*Localized rainwater harvest + infiltration*

**Terraces**  
  
*Urban localized treatment + infiltration*

**Pond**  
  
*Urban dispersed treatment + infiltration*



**Living Machines™**  
  
*Water center integrated treatment and infiltration*

**Sunken Plaza**  
  
*Urban localized treatment + infiltration*

**Chinampas**  
  
*Localized water treatment + distributed infiltration*

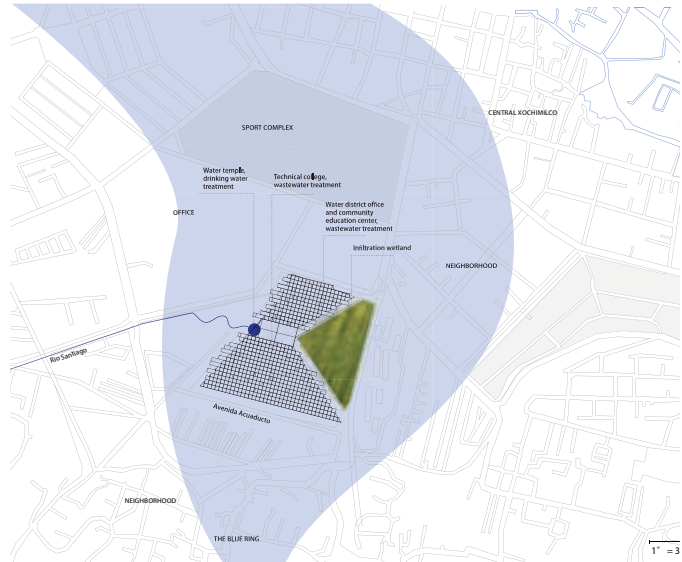
**Blue Roofs**  
  
*Rooftop rainwater harvesting + localized treatment*

**Bridge**  
  
*Rooftop rainwater harvesting + dispersed treatment*



Xochimilco: A Pilot District

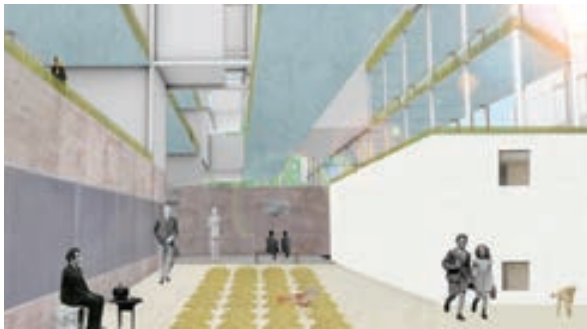
Demonstrating a typical condition of a water community, the water sanctuary at Xochimilco combines the program of a technical school and community resources. Living Machines™ are put on display on the interior to become a visual of black water treatment, feeding the outdoor chinampas that are used for neighborhood agriculture. Spaces such as classrooms and offices are situated within the scaffolding structure to allow for visual connectivity and program flexibility.







Transverse Section Through Plaza



Interior



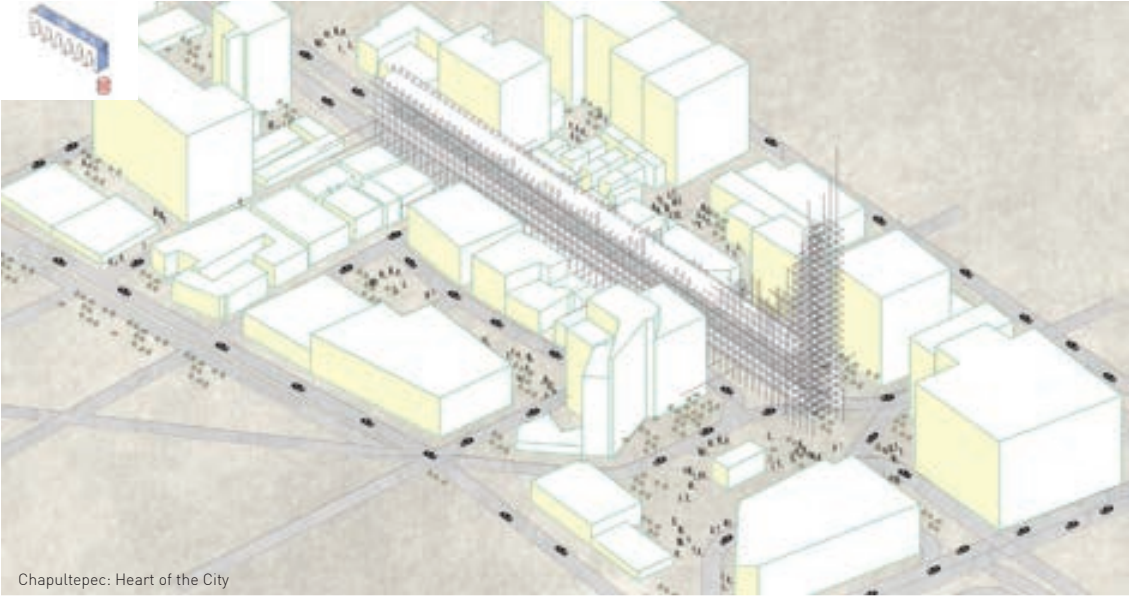
Infiltration Wetland





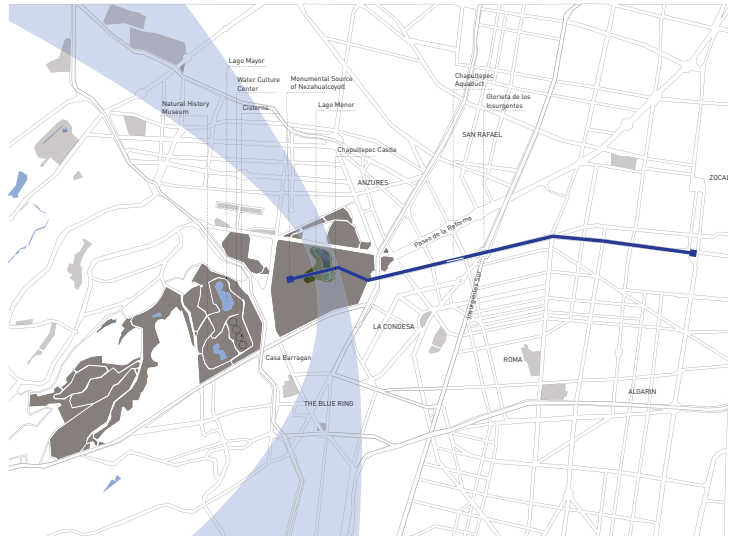
Treatment Pools





Chapultepec: Heart of the City

Historically the center of Mexico City, now the Zocalo, received water by an aqueduct flowing from Chapultepec Park. This site proposes a modern, accessible aqueduct to be built along this same path, but reversing the flow to be treated and dispersed to the city in Chapultepec Park. This aqueduct consists of a monumental water capture tower, urban rooftop collection, and a treatment 'cenote' as the aqueduct submerges into the earth at Chapultepec Park.





Longitudinal Section Through Cenote + Tower

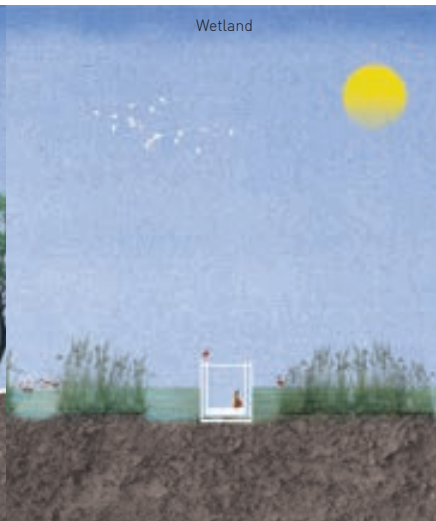


Submerge into Wetlands





Treatment Cenote





Blue Street



Ave. Chapultepec



Ave. Rio Loza

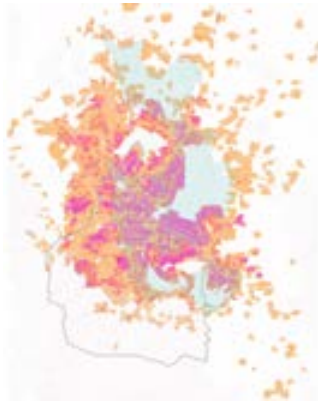


Tlaxcoaque Tower

# Circuito Agua

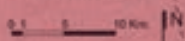
Yuansi Cai, Annalisa Castelli, Richard Hua

As an exploration into decentralized waste water treatment systems, this project reimagines the relationships between people, city, and water.





-  Drainage Dams
-  Covered or Turbated Drains
-  Rivers
-  CDWR Municipalities
-  Ancient Lake
-  Loop System
-  Existing Water Treatment Plant/Sump
-  Selected Site
-  Pedestrian/Bike Bridge



# Circuito Agua

By 2020, torrential downpours have immobilized CDMX, drainage systems are failing and families are displaced, and streets flood with as much as five meters of water. Wastewater treatment is nearly nonexistent and with a population approaching 25 million, blackwater is rampant and once clear rivers have become toxic.

Our multiphase proposal involves segregating sewage from runoff and merges two of the main drainage systems, effectively forming a continuous canal loop across the city. Wastewater treatment becomes decentralized and selected sites are assigned functions based on their size and population. Regional blackwater is redirected into localized treatment center where it is converted into reusable water. In conjunction with three designated ecological zones, sites within the city become designated wetland areas, effectively mitigating flooding.

By 2070 the system rejuvenates the essence of water in CDMX. CDMX's future lies in its past, and by reimagining the courses of life in the region, a future of clean water is possible.



Decentralization Concept Diagram



Phase 1 | 2030

start construction of large treatment plant



Phase 2 | 2040

start construction of eco-park and small floodplains in the city



Phase 3 | 2050

open up the buried canal and established a pedestrian bridge



Phase 3 | 2070

complete the loop system



Urban



Suburban



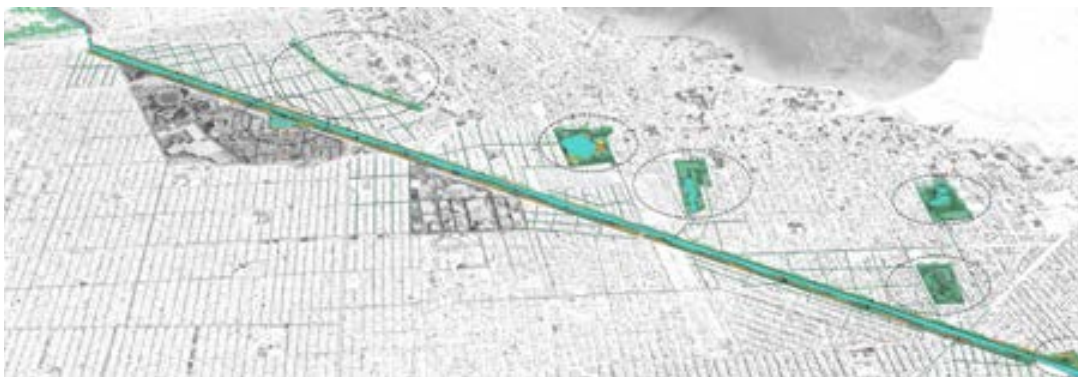
Rural



Urban



Suburban



Rural



Ecological Park



Circular Hub | Las Vegas Xalostoc



Playground | Gabriel Ramos Millan



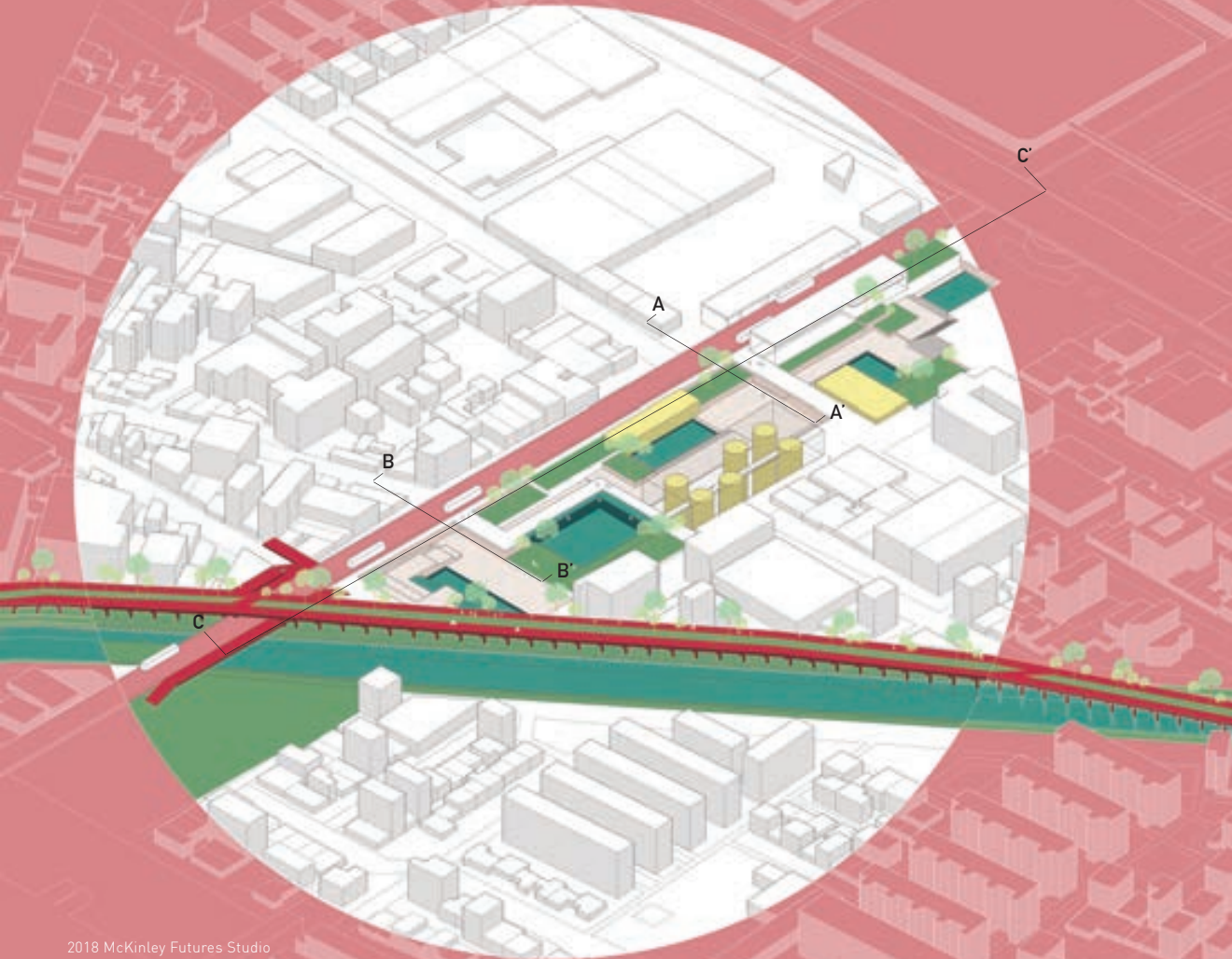


## Urban Jungle | Iztacalo

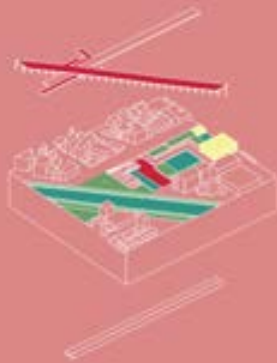


## Xochimilco









Recreational



Residential

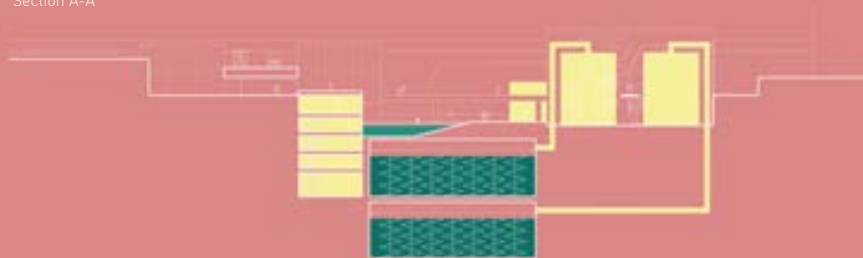


Commercial

Section C-C'



Section A-A'



Section B-B'

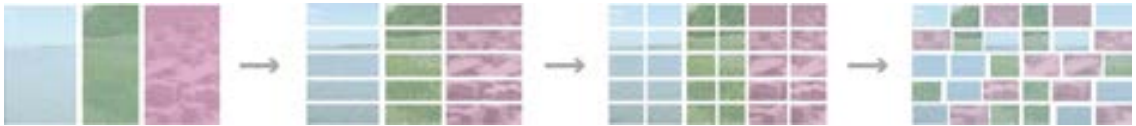




# PoroCITY

Melissa Marquez, Ilse Torres, Lauren Wabiszewski

Integrated elements of water, green space, and urban elements that create a self sustainable development for Valle de Chalco, ultimately leading to a large scale return of Lake Texcoco.



Conceptual Diagram



## PoroCITY

Valle de Chalco, an underrepresented community outside of Mexico City, constructed on the lakebed of former Lake Texcoco, faces continual flooding due to poor infrastructural control, ultimately leading to large scale protests. The protests result in a government planned metro line connecting Mexico City to Puebla to be redirected through the heart of Chalco. Following the metro line, a master plan is developed creating a porous city of high density housing that alleviates the flooding problem and increases livability. The development starts at the edge of a determined flood plane allowing for a large scale return of Lake Texcoco. Built above the existing city fabric, the raised street level protects against the floods by utilizing existing structures to provide containment for stormwater. A green barrier is gradient into the city fabric to celebrate the wetlands and allow for further resistance against flooding. This model of Transit Oriented Development provides example remediation for future cities.

2018 McKinley Futures Studio







VALLE DE CHALCO - 2018



2020



2025



The resilient people of Valle de Chalco successfully protest, convincing the government to intervene in the flooding problems that had persisted for years. Their use of chinampa restructuring strategies of their flooded homes was reintroduced to a Transit Oriented Development scheme allowing for a phased return of Lake Texcoco.

2030



2040

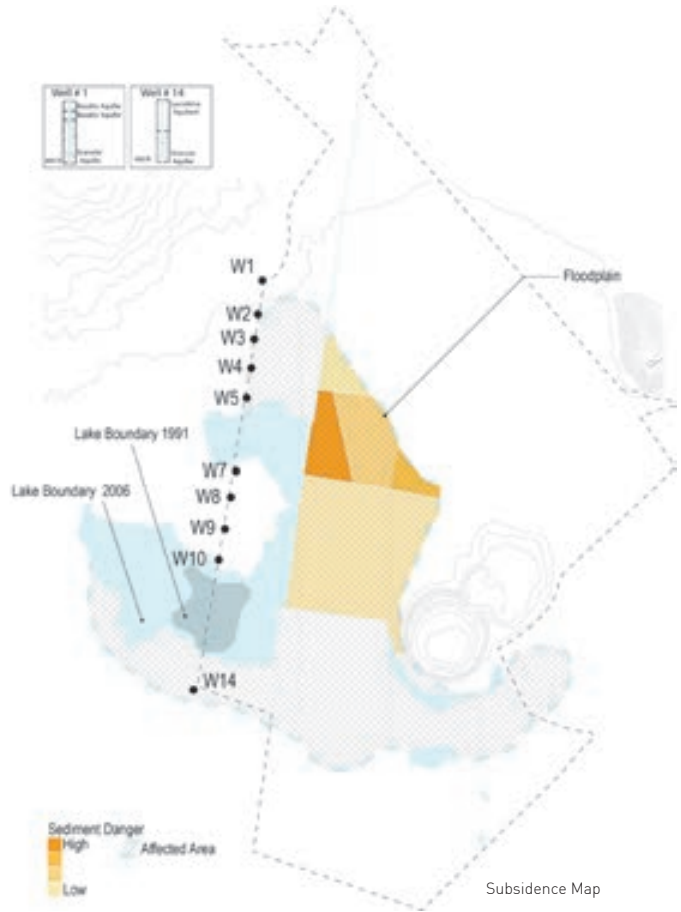


2060



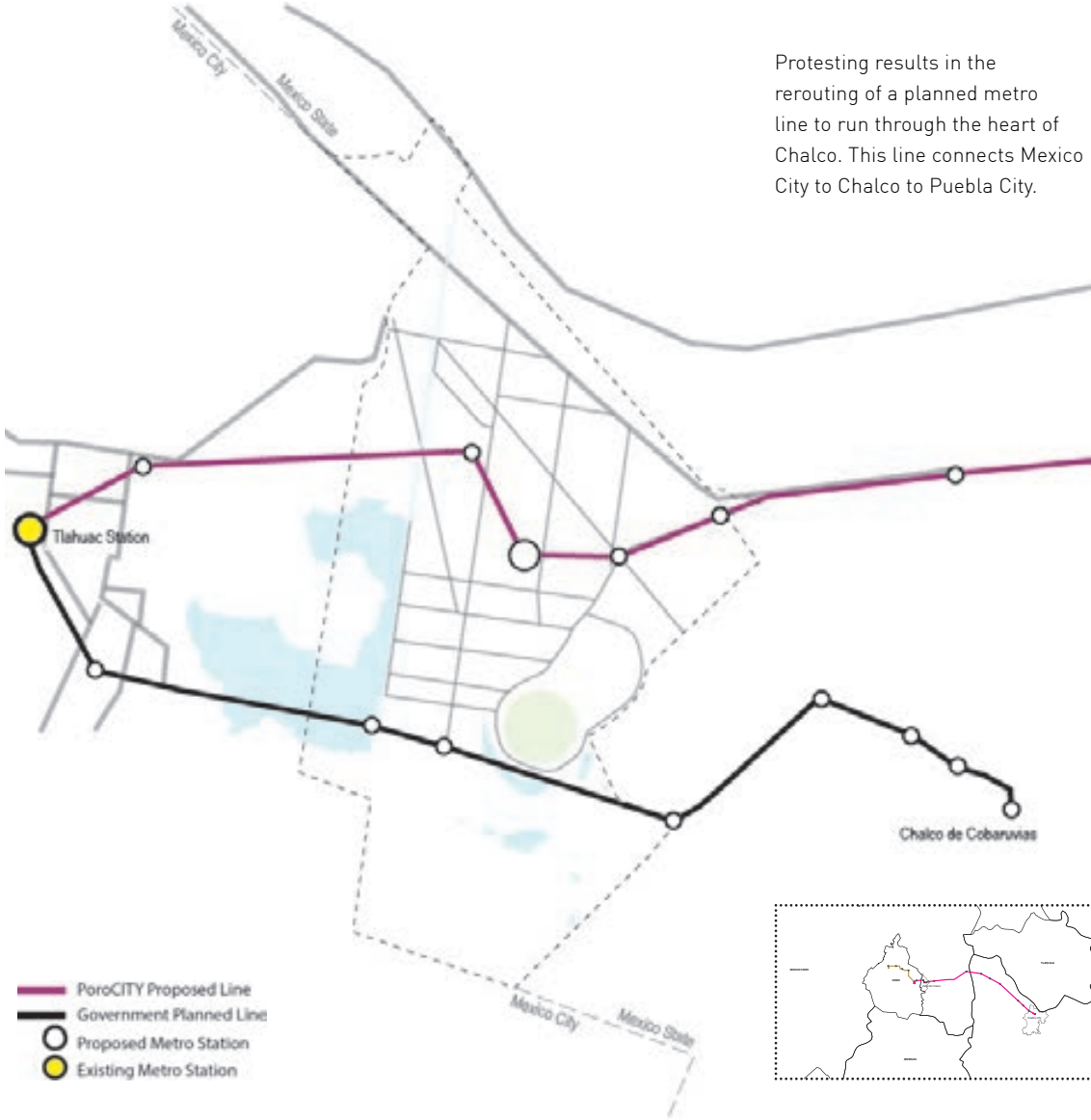






Chalco is sinking due to the extraction of water from the aquifer. The boundary of subsidence threat dictates the edge of return of the lake.

Protesting results in the rerouting of a planned metro line to run through the heart of Chalco. This line connects Mexico City to Chalco to Puebla City.





The integrated green edge and canals are activated seasonally to alleviate flooding between the expanded lake and the new development. Urban areas around the metro stations are rapidly densifying.



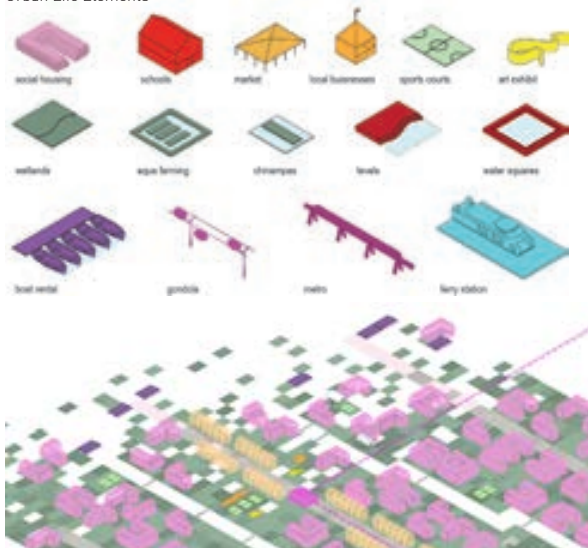
Low Water Level



High Water Level



Urban Life Elements





The housing developments are built above the existing city fabric, incorporating canals into the old streets to manage flooding in place.





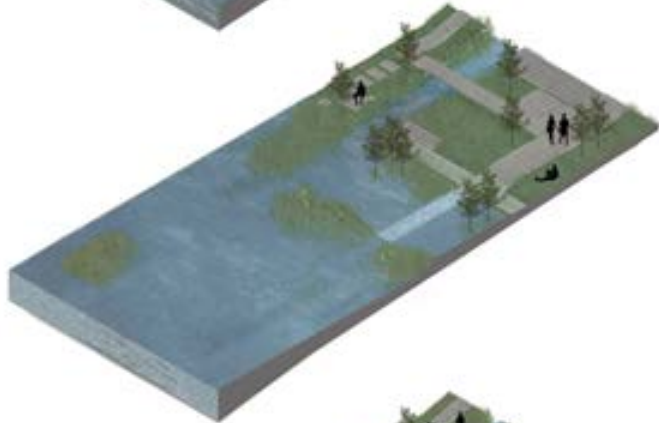
Density Map



Low Water Level



Average Water Level



High Water Level





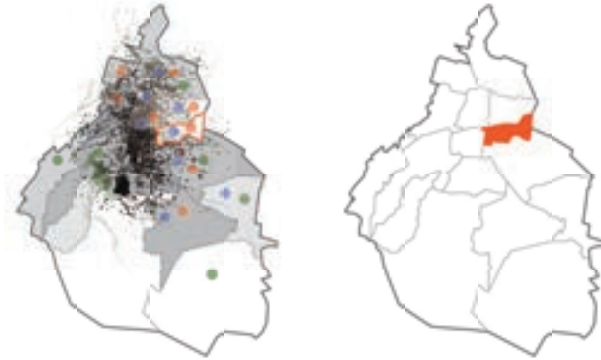
Returning Chalco to its lacustrine past allows for the seasonal changes to fluctuate gracefully. The integrated wetlands provide the necessary gradation to serve its population throughout the year.



# Centros

Amy Broska, Melinda Groenewegen, Fengyi Xu

Centros proposes a city-wide hub system,  
that will improve social equity through  
flexible infrastructure.







## Centros

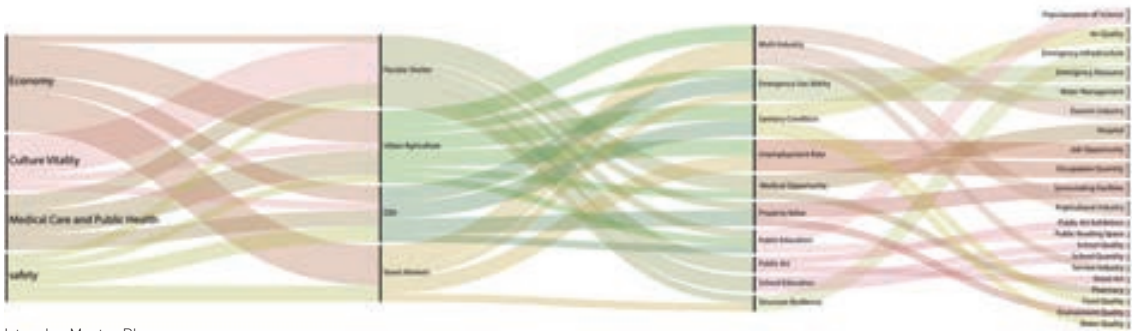
This project proposes a city-wide hub system that supports flexible public services, activities, and shelter for both daily and disaster use. The project focuses on Iztacalco as a planning paradigm because of its existing condition as an area with a dense population and a lack of resources. We redesign nine existing open spaces within the borough into hubs that boasts flexibility to provide an assortment of amenities for the community and to repurpose itself over time as the needs of the people and place change.



Each hub has a distribution of large water towers, which in addition to providing adequate water for the community act as pillars for a system of flexible raised rings and circles that define the park space. Through the moveable cables, citizens themselves can be the agents of change. In the event of a disaster these moveable elements transform to provide spaces for medical care, food, water, power, communication resources, and shelter.







Iztacalco Master Plan



Iztacalco Master Plan



Economy System



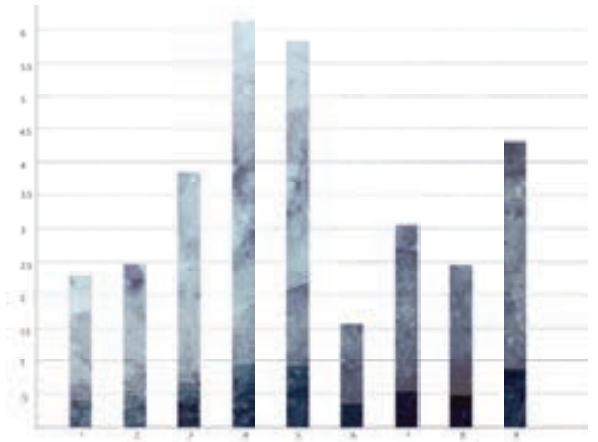
Iztacalco Water System



Ecology System



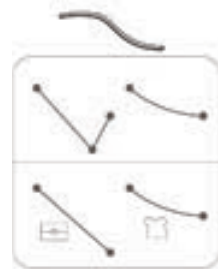
Water System

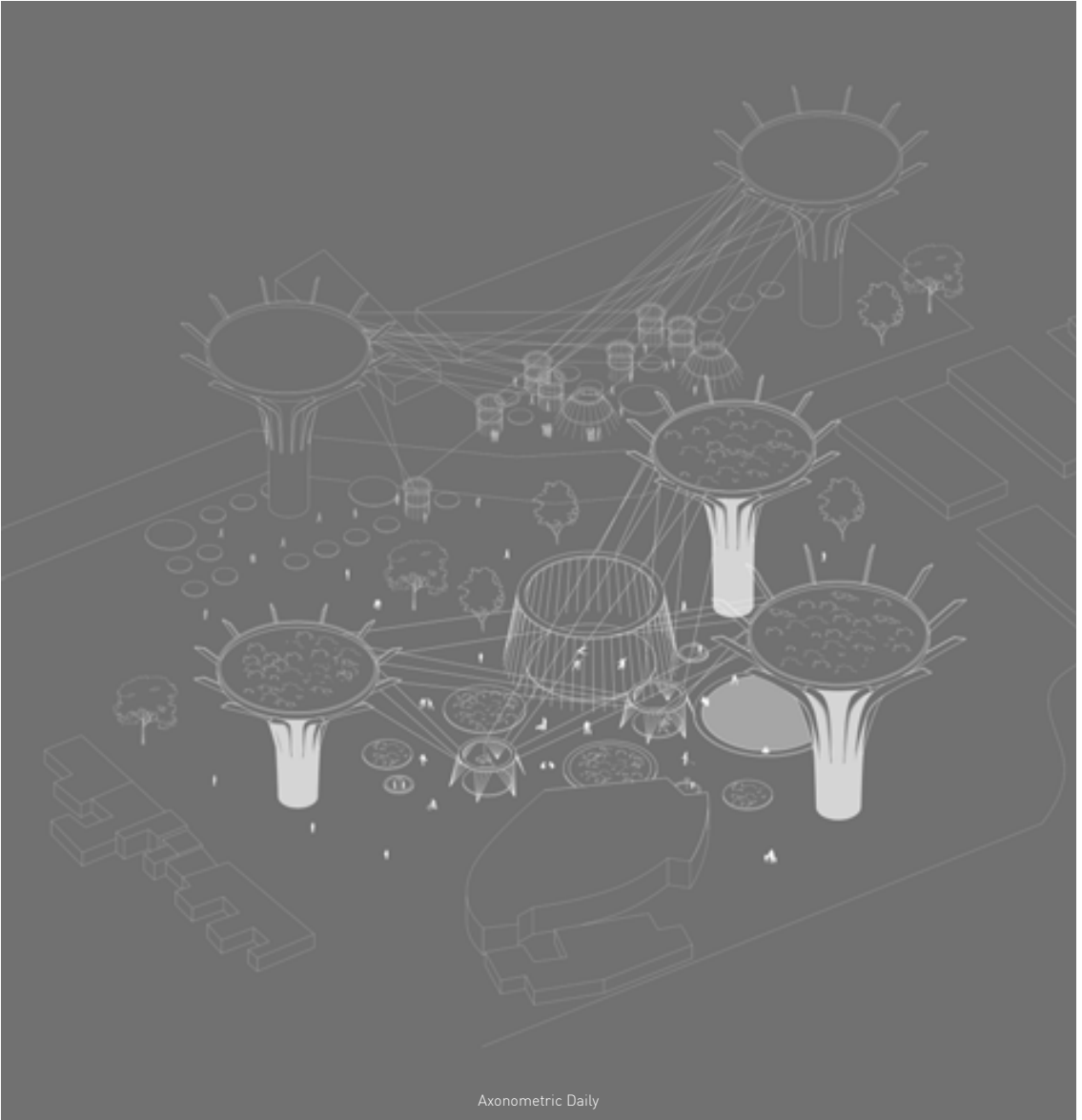


Water Needed During Disaster Everyday

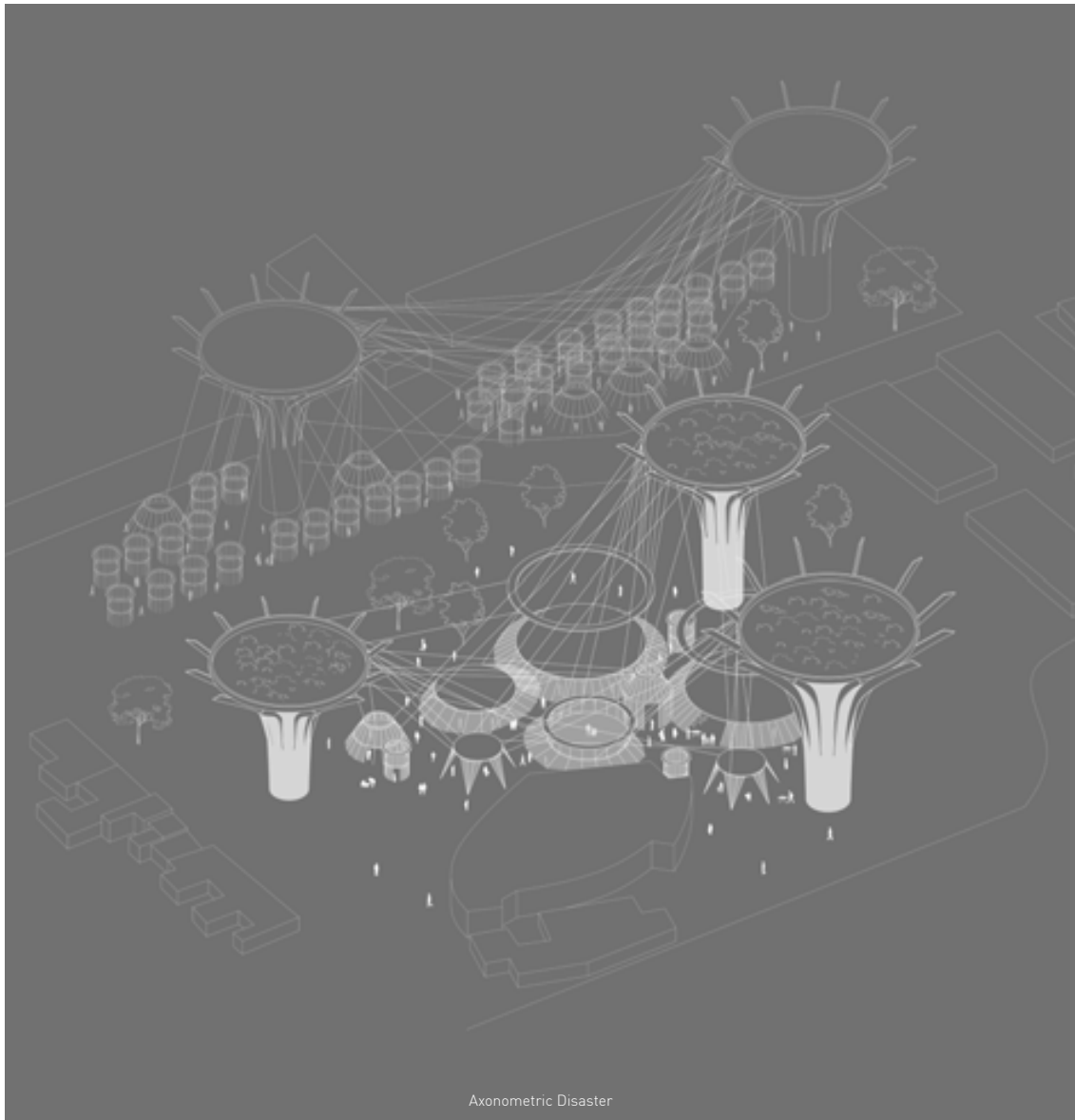




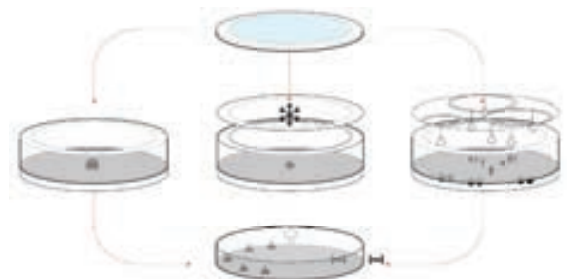




Axonometric Daily

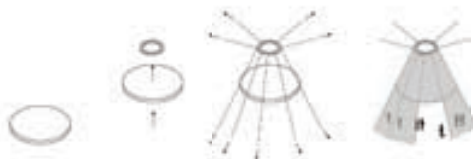
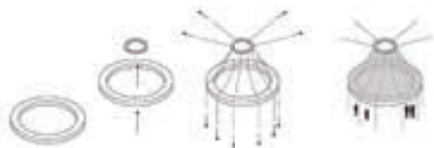


Axonometric Disaster



The platforms could be shifted for different functional use.

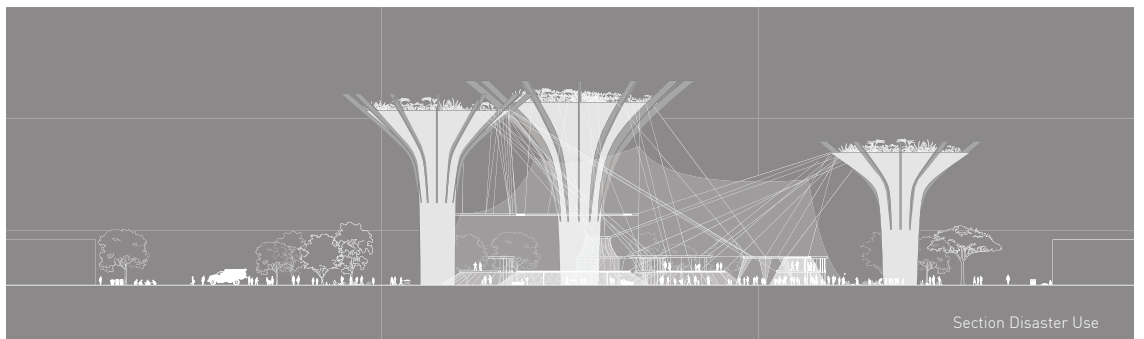
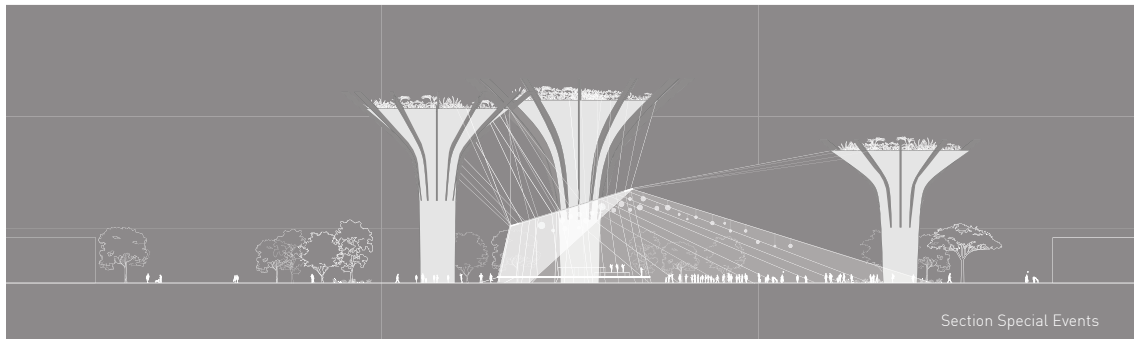
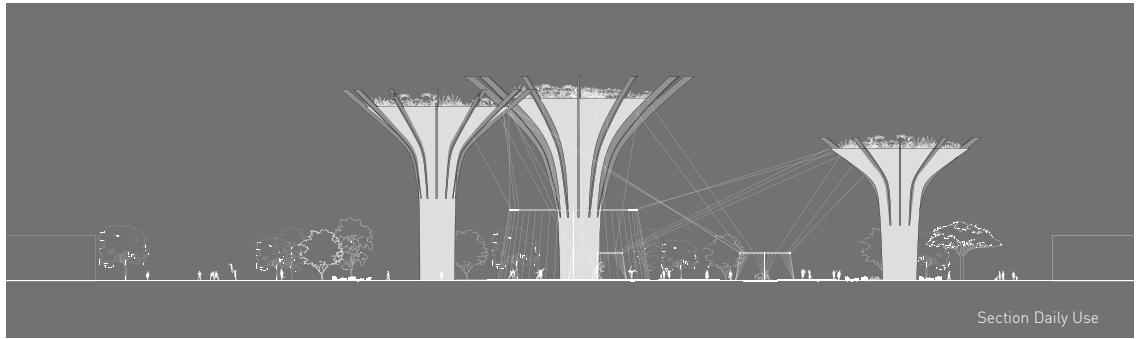




Design Guide



After disaster, the infrastructure could be shifted fast, to cater medical use.



## Architecture on Revolution

Veronica Leanos, Gabrielle Lewis, John Rodezno

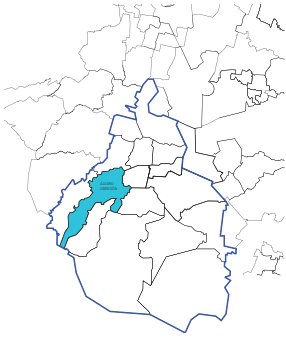
“Architecture can’t force people to connect, it can only... remove barriers and make the meeting places useful and attractive.”

*Denise Scott Brown*

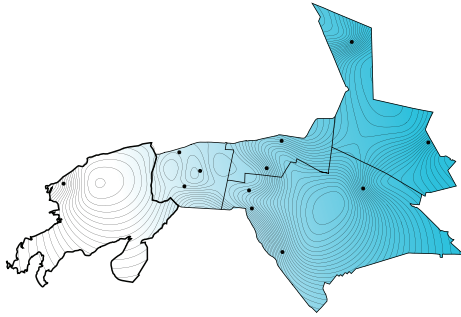
*From 2009 interview with Andrea Tamas*







City



Boroughs



Colonias





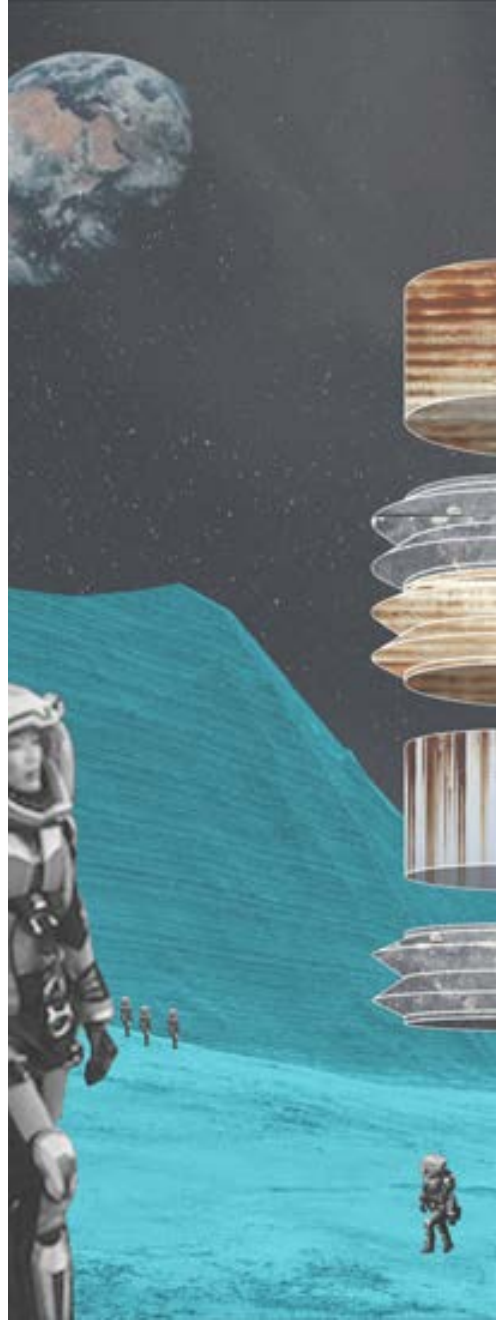
“A revolution has occurred, attempting to call attention to the growing disparity of neighborhoods such as Santa Fe.”

## Architecture on Revolution

Inequity can be seen throughout neighborhoods in Mexico City such as Santa Fe where segregation issues between the rich, who live in gated communities and high-rise condominiums, and the poor, who lack adequate access to basic utilities, are widely visible. University students throughout the city began to protest the inequity of this segregation, ultimately catalyzing into a city-wide revolution aimed at reclaiming the privatized public lands that have been overtaken by the wealthy.

As initial form of protest, students have assembled structural space-frames, transported and deployed these units via pig-shaped blimps, as interventions of disruption.

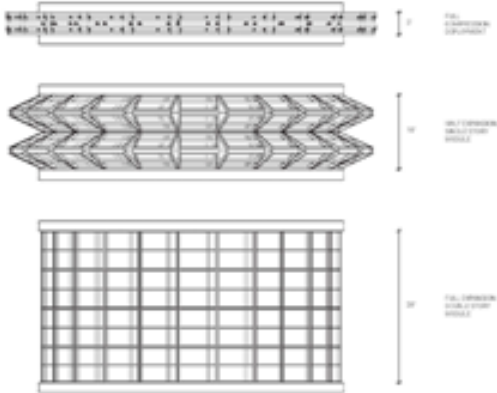
Subsequently, a recycling center program is implemented to provide educational opportunities for how to salvage from the old. Inspired by Lebbeus Woods' theory of post-war architecture, "the post-war city must create the new from the damaged old", various phases occur over time that deteriorate current boundaries, in order to alter the uneven hierarchical system.



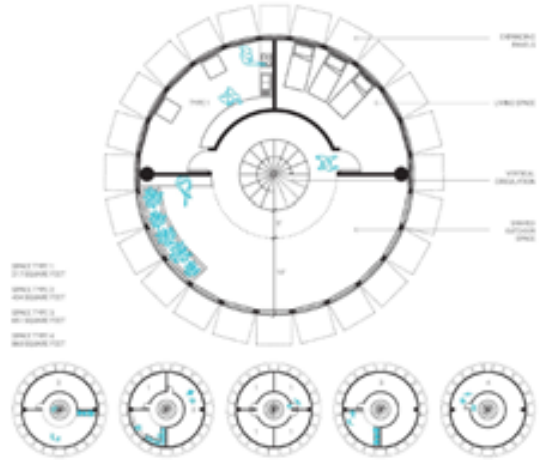




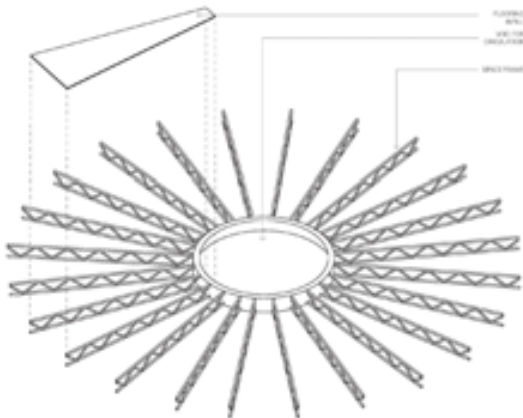
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 Architecture on Revocation  
 Expandable Modules  
 SD,784,321  
 Sheet 1 of 6



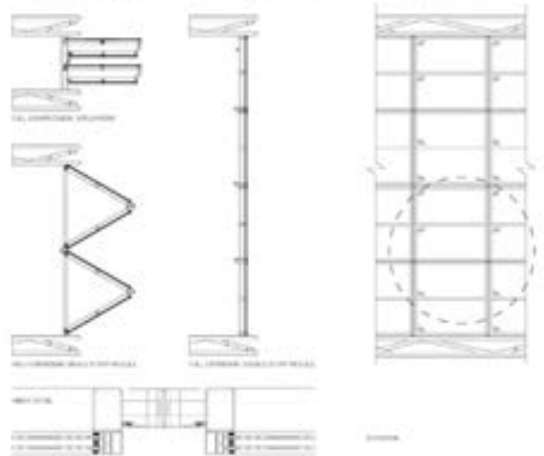
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 Sheet 2 of 6



July 7 2020  
 Filed Jan. 1 2020  
 Architecture on Revocation  
 Module Space Frame  
 SD,784,321  
 Sheet 3 of 6



July 7 2020  
 Filed Jan. 1 2020  
 Architecture on Revocation  
 Ring Mechanism  
 SD,784,321  
 Sheet 4 of 6





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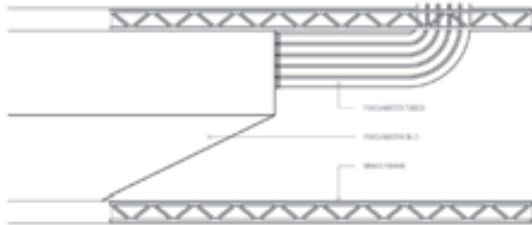
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Tube Connections

Sheet 5 of 6



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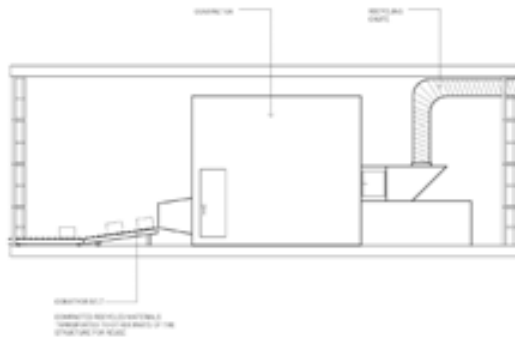
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Recycling Chutes

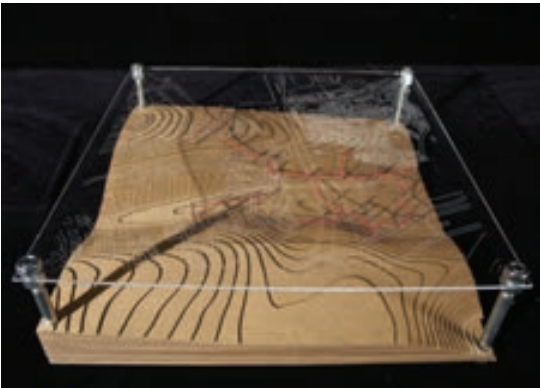
Sheet 6 of 6

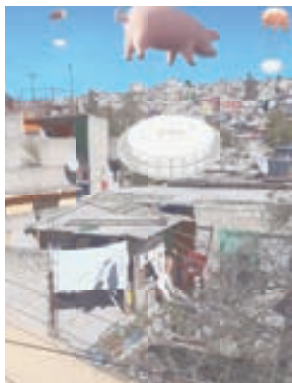




“...the post-war city  
must create the new  
from the damaged  
old...”

— *Lebbeus Woods*







## The Site is the City

Upon arriving Mexico City, students very quickly began to become interested in the greater issues of the City, those related to water, infrastructure, inequity, and seismic activity. What quickly became clear was that our original proposed topic pertaining to vacant land and buildings was simply too specific for a studio that was asking students to consider the future of the city. In conversation with the students, we all agreed that we would suspend the original proposed focus, and rather try to take advantage of our short time there to take in as much of the city as we could. And so, rather than seeking out specific sites or locations for intervention, we made the City the Site itself. This was a defining moment for the studio, one that was both illuminating, but also challenging. Traditional architecture and landscape studios tend to focus on specific sites or neighborhoods of a City. We had decided to look at a City of 23 million people in its entirety. How does one address the entirety of a city in a design studio?



## Approaching the Problem: City to Colonia, or Colonia to City?

Upon returning from Mexico City, the six groups began to address the 2070 design criteria that we had assigned to them. What became interesting was that the resulting design proposals developed using one of two methods: 1) Through a consideration of a system as it relates to the entirety of the City, and using one or more specific areas of the City as a way of illustrating their design proposal; and 2) Through a consideration of a specific colonia of the City, using their design proposal as a way for addressing the City as a whole. The 'Cirquito Agua' and 'The Blue Ring' groups approached their projects using the first methodology. Cirquito Agua's proposal developed out of their interest in and analysis of the infamous Grand Canal del Desague that serves as the primary means of transporting wastewater and sewage out of the City; whereas The Blue Ring's proposal developed out of their realization of the ironic condition that the impoverished communities that surround the periphery of the City also reside on the very location where water to the City's underground aquifers can most easily be replenished.

Alternatively, the four other groups design proposals developed out of their interest in a specific colonia of the City. AeroEspina's project really took off [no pun intended] once they realized the potential of the existing airport's runways and spaces between them as foundations for urban and parkland development, while completing a link from the Lake to the east, through the City's historic center, all the way to Chapultepec Park to the west. The Centros Group's proposal for a city-wide hub system that could serve everyday recreational uses while transforming to a site for disaster relief developed out of their detailed analysis of Colonia Itzacalco. The PoroCITY group focused their interest on the Chalco neighborhood and specifically its current diked edge condition along Lake Chalco, leading to their proposal for phased development that would allow for the return and integration of the lake with the city. Finally, Architecture on Revolution's proposal developed out of their interest in the very specific edge conditions found between impoverished and gated communities in the Santa Fe area of Mexico City, leading to their proposal for a futuristic architectural system to be constructed by protesting University students intent on rectifying the inequities of the City.

## Envisioning, not Predicting

Unlike most of the previous McKinley studios which conceived the design proposals for the distant future, we were more interested in how design and planning strategies are developed as evolving constructs, a continuum that might begin at this current moment. In another word, we are interested in understanding how the future visions can be connected to the present conditions of the city and immediate actions that can be taken, leading to a desired outcome in the future.

Professors Julie Parrett and Rick Mohler, our colleagues who taught the previous 2017 Futures Studio, succinctly articulate in their own studio booklet the importance of understanding how one should approach a studio such as the Futures Studio:

*“What is a Futures Studio? ... By imagining multiple alternative futures one can begin to assess their respective advantages and plausibility to arrive at one or more preferred futures ... We find ourselves less concerned with predicting the future and more interested in envisioning alternative possibilities ...”*

This is not an ‘easy’ studio; it requires both the faculty and the students to change their way of thinking about design processes. In more conventional design studio settings, the task at hand tends to be more about proposing specific solutions to a set of given problems. For this studio, the task was more about dreaming of the future, while providing a means of illustrating what that dream of the future might look like. What impressed us most about the studio was that the students carried on, and pulled through to the end with projects focused on relevant issues, presented with clear convictions and strong graphic presentations. Thank you Amy, Annalisa, Fengyi, Gabrielle, Ilse, Kelsey, John, Laura, Lauren, Mackinley, Melinda, Melissa, Richard, Roxanne, Sharon, Veronica, Yang, and Yuansi.

## Two Sides of the Border Exhibition, Yale University School of Architecture

Shortly after our return from our studio trip to Mexico City, prominent Mexico City based architect Tatiana Bilbao (and professor at Yale University and Columbia University) invited our studio to be one of thirteen programs to take part in an international exhibition of work entitled 'Two Sides of the Border', at Yale University's School of Architecture Gallery from November 29th 2018 through February 9th 2019. We are honored for the work of our students to have been included in this international exhibition, and it provides for a fitting way to culminate the studio, while honoring five years of McKinley Futures Studios. The following is the statement issued for the exhibition opening:

*What if we stopped dividing the United States and Mexico into two separate nations, and instead studied their shared histories, cultures, and economies, and acknowledged them as parts of a single region? During the spring 2018 semester, Tatiana Bilbao organized an academic initiative called *Two Sides of the Border: Redefining the Region*. The Yale School of Architecture Gallery will exhibit the works of 13 architecture studios from the US and Mexico that participated in the initiative, examining regional issues across the two countries. The current political climate exaggerates differences across the border, and at a moment when migration is at the forefront of political discourse and NAFTA is being renegotiated as the USMCA, the exhibition investigates the urgency of shifting the narrative. To redefine and reimagine the border region as an integrated whole is a critical project for*

*architectural, political, and cultural institutions today.*

*Two Sides of the Border is an exhibition in the form of an atlas, a book that selectively draws space and defines borders in order to produce a preferred image. The new atlas presents three perspectives: projective, objective, and subjective. The projective atlas displays work from the 13 studios' examinations which took on interdisciplinary approaches to study and propose projects dealing with cross border issues: migration, farming labor in Ohio and Kansas, and remittance houses in Mexico to name a few. The objective atlas shows new maps by Thomas Paturet, capitalizing on the assumption that maps have the capacity to dissolve North American borders by emphasizing other geospatial relationships. These are displayed alongside historic maps presenting 400 years of*

*shifting borders in the region, destabilizing the collective imagination of the border. The subjective atlas is a photo essay by the photographer Iwan Baan who traveled to each of the studio sites to capture their changing landscapes and architecture's role in these regional relationships.*

*Two Sides of the Border aims to redefine the region and simultaneously is a collaborative project that redefines North American pedagogy. The academic initiative fluidly spans language, borders, institutions and nationalities—all based on the shared interest in developing a comprehensive and unified imagination of the region. The exhibition is organized by the Mexico City-based architect and educator Tatiana Bilbao and is designed and curated by NILE.*





*The studios included in the show are:*

- *Tatiana Bilbao and Andrei Harwell's studio on reinvigorating rural Mexico, at the Yale School of Architecture;*
- *Tatiana Bilbao and Nile Greenberg's studio on Remittance Homes, at Columbia University Graduate School of Architecture, Planning, and Preservation;*
- *Jorge Eduardo Galvan Salinas's studio on downtown Monterrey, at the Universidad de Monterrey;*
- *Juan Pablo Serrano Orozco's studio on development outside Mexico City, at the Universidad Iberoamericano;*
- *Karolina Czecek's studio on producing a food hub in the Ohio Valley, at the University of Cincinnati;*
- *Ana Paula Ruiz Galindo's studio on food production in Ulysses, Kansas, at The Cooper Union;*
- *Derek Delekamp and Rozana Montiel's studio on reconceiving the Tijuana–San Diego border, at Cornell University Architecture, Art, and Planning;*
- *Raveevarn Choksombatchai's studio on conceptual border strategies, at University of California, Berkeley;*
- *Stephen Mueller's studio on border dust, at Texas Tech University;*
- *Ersela Kripa's studio on cross-border pollutants, at Texas Tech University;*
- *Kathy Velikov's studio on border water conditions, at Taubman College, University of Michigan;*
- *Juan Miro's studio studying Monterrey and Austin, Texas, at the University of Texas at Austin;*
- *Robert Hutchison and Jeff Hou's studio on urbanism in Mexico City, at University of Washington.*



