Mikhail Kossir

EXTREME SPACES

EXTREME DESIGN: ON THE SEARCH FOR *LIMITS*

This collection of works stands for a journey toward the limit-experience.

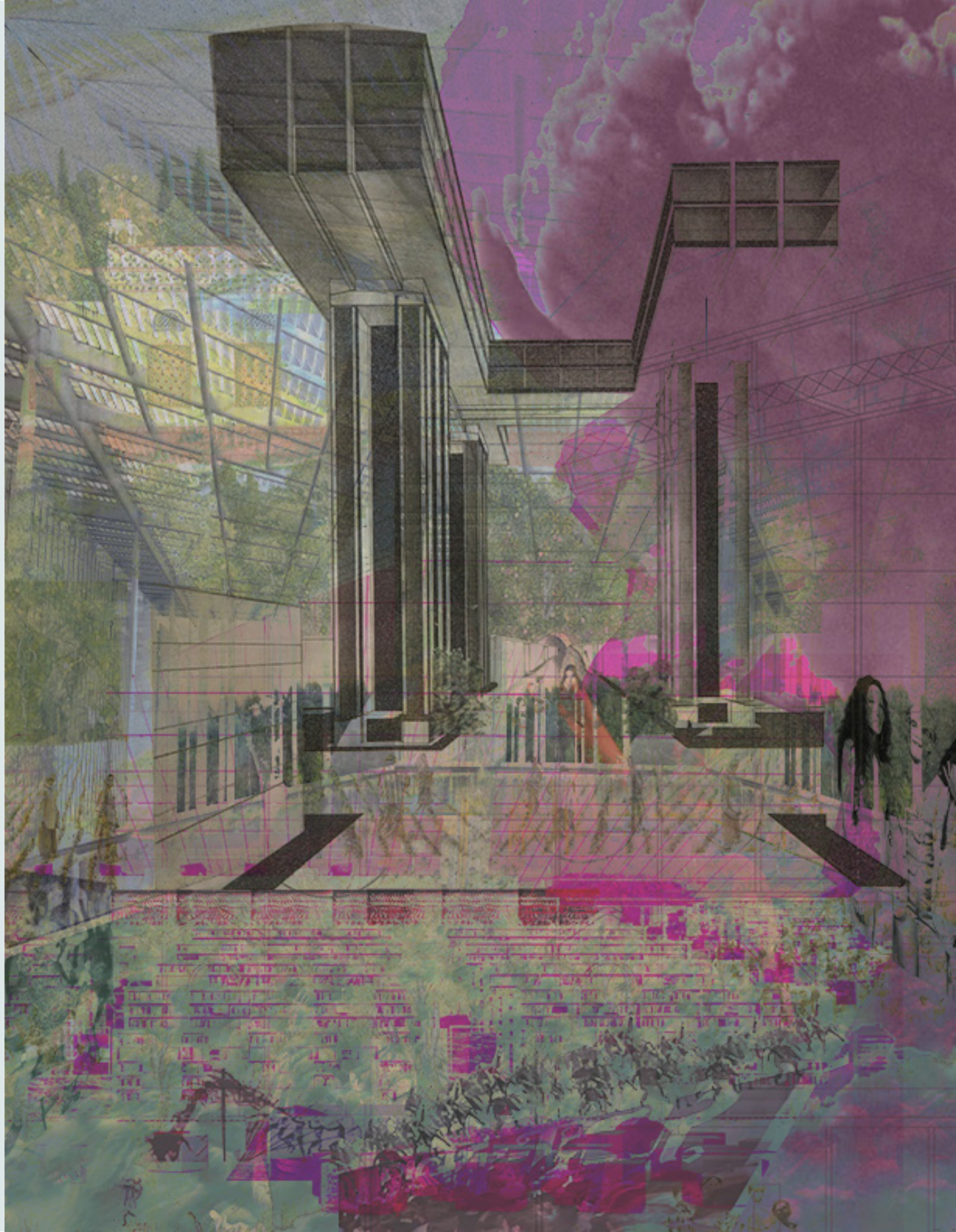
LIMIT EXPERIENCE: *(Foucaudian)* **whereby an action approaches the limit of possible experience, to such a point that the subject is dissociated from the constructions of reality and of the self, at last confronted with the Real.**

This collection of works stems from the feeling and assumption that today an extreme situation has been reached.

EXTREME SITUATIONS: (*Crisis*) **whereby (1) socio-economic inequalities, (2) climate pressures, (3) political, ideological, and military extremism, (4) meet the complacency of culture.**

This collection of works firmly believes that architecture is a form of knowedge rather than the knowledge of form.

ARCHITECTURE: (*Tschumian*) **whereby architecture is approached as a field of contaminations, where knowledge traverses traditional rigid epistemic boundaries. Art, history, material science, structures of power, and all lenses through which reality can be analyzed can (and should) become a place of architecture.**



I. EXTREME INCLUSION

ON THE SEARCH FOR THE LIMIT OF MATERIALITY

EXTREME INCLUSION

FALL 2021 | QUES IN ARCH HIST I| GSAPP
INSTRUCTOR REINHOLD MARTIN

AL-TAHTAWI OR THE ARAB PARTICIPATION IN THE RACIALIST DISCOURSE

Most of the current discourse about 19th century imperialism and racialism in architecture focuses on the Western side of its application. While it is true that this analysis is extremely relevant today by virtue of the western global influence through its colonial empires and ensuing economical hegemony, we tend to omit the participation of other cultures in such racialist discourses, in particular in the Arab world. This omission echoes the overlooking of the Arab and Imazighen, or Berber, participation in slavery and the slave trade. Through the close reading of Rifa'a Rafi al-Tahtawi's An Imam in Paris: Account of a Stay in France by an Egyptian Cleric, I would like to argue that the Arab and North African worlds shared some aspects of those views. I will do so by analyzing al-Tahtawi's simultaneous admiration and criticism of Western and particularly French culture and architecture that is revelatory of a sense of equality between these two worlds, and of superiority relative to other cultures.

SPRING 2024 | SPIRITS AND MATTER| GSAPP
INSTRUCTOR ALIREZA KARBASIOUN

CASABLANCA'S SEGREGATION URBANISMS COLONIAL/POSTCOLONIAL CONTINUITIES

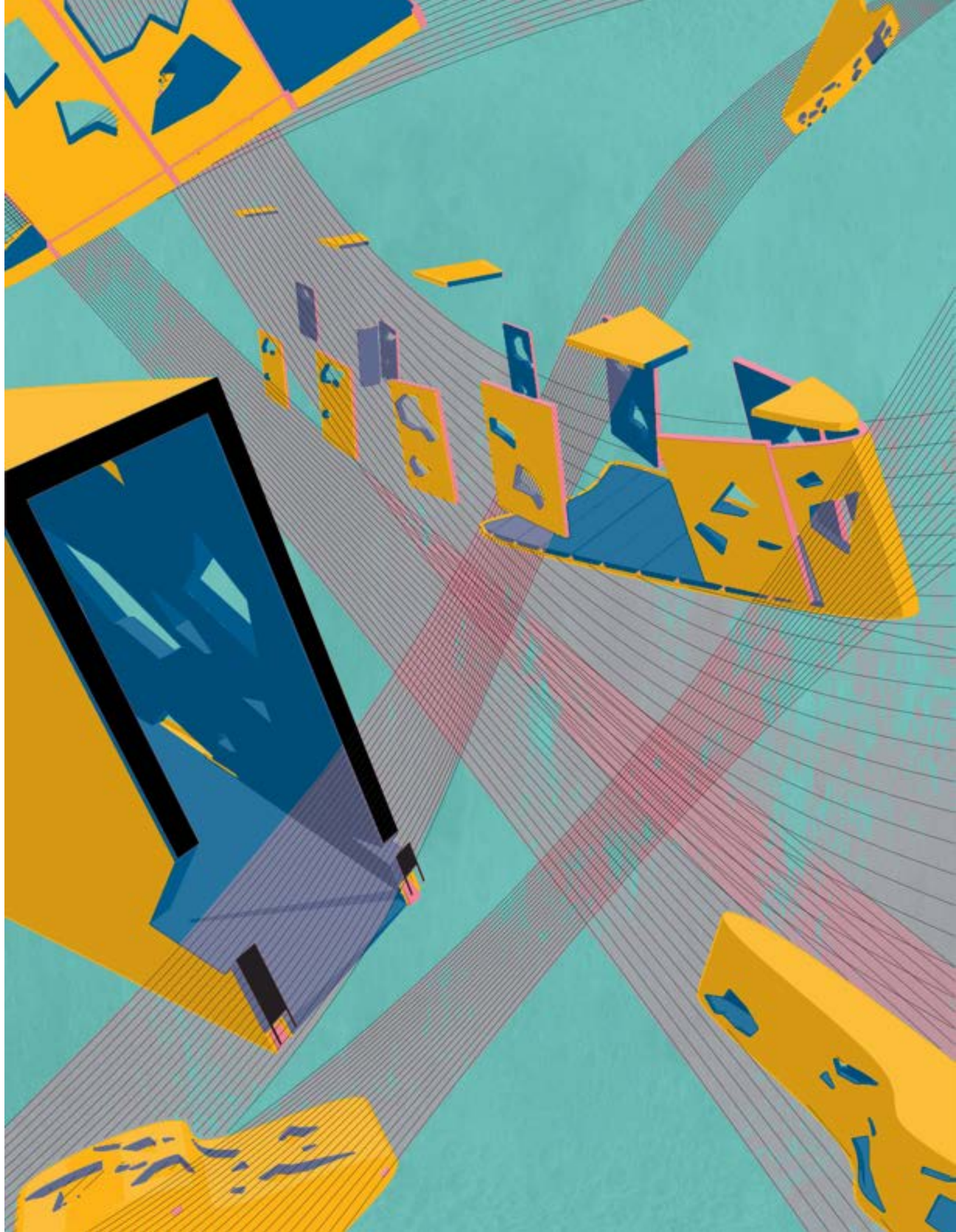
Evolving from the eleventh century into a port city of varied importance and traction, Casablanca's history has been rhythmed by successive conquests, destructions, and rebuilding campaigns. This paper will focus on the city's latest form as Morocco's colonial and post-colonial economic hub and the country's largest and most populous city. Starting from the late nineteenth century, the paper will attempt to trace Casablanca's various urban shifts in planning and building while uncovering the layers of influence – local and colonial – that shaped these developments. The paper will frame Casablanca's present socio-economic spatial segregation as a direct continuation rather than a consequence of the successive French Protectorat's urban planning policies (1912-1956). The transition from colonial ethnic to post-colonial socio-economic segregation in Casablanca, the paper claims can be explained through the early collaboration between French colonial powers and the local elite as well as by the continuation post-independence of an authoritarian regime which continued sharing interests as well as expertise in terms of planning regulations and strategies. To do so I will first attempt to survey Casablanca's urban development and planning during the French Protectorate. Starting during the nineteenth century, I will focus on the two planning schemes that defined the city's development pre and post-Second World War, The Prost (1919) and Ecochard (1946) plans. Along with these planning schemes, I will be analyzing a few examples of housing projects that will help uncover the effects and social dynamics envisioned by said plans. I will attempt to show that in the power dynamics at play around these urban developments, while the racial factor is central, socioeconomic considerations at times supersede, giving birth to a complex web of dominations and at times collaborations between colonial and local actors. The second part of the paper will briefly trace Casablanca's urban development tendencies post-independence as a socioeconomic continuity of the protectorate's racially motivated segregation. The main focus will be Morocco's shift to project-based urbanism in 2004 through the building of new cities and prestige projects. The paper will examine cases of such developments in Casablanca showing how this new shift further establishes said colonial urban segregation processes. I will claim that such continuities are best explained by the persistence of an authoritarian regime whose capitalistic interests have remained very close to that of the past colonial powers. I will end by suggesting that Morocco's current condition as a settler state further sheds light on Casablanca's urban segregation continuities pre and post-independence.

Fall 2021 | Core I | GSAPP
INSTRUCTOR ANNA PUIGJANER

THE AMSTERDAM PODS

The Amsterdam Pods' object is the reunification of the NYCHA fragmented Amsterdam Houses community in Manhattan's Upper East Side. Following a failed school rezoning of the area in 2016 —whose goal was the mitigation of the social, economic, and racial segregation prevalent in the area— the community's youth found itself fragmented with no real progress in terms of integration. The project consists of a series of Mycelium light weight moveable "pods" whose main goal is to act as an after-school space for the community's youth. The program is determined and controlled by the kids, in order to restore the "self-confidence" and "trust" that lacks in their current schools, in the hope to positively influence their academic, professional, and communal lives. Outside of the after-school hours, the pods are used by the community as public space, or in order to create an "Amsterdam Micro-Economy" that will try to help mitigate the community's economic and social segregation.

EXTREME: SEGREGATION
LIMIT: AGENCY, MATERIALITY, FLUIDITY, CONNECTION



PS 199 (2015)

PS 199 (2019)

PS 191 (2019)

CENTRAL PARK

AMSTERDAM HOUSES

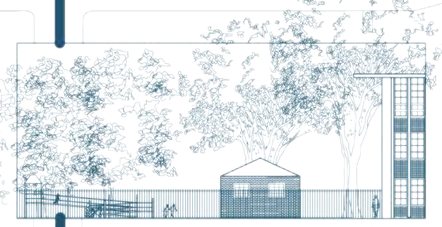
LINCOLN CENTER

COLUMBUS CIRCLE

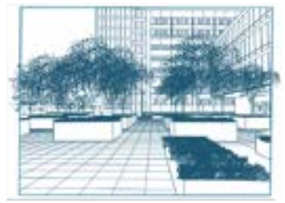
PS 191 (2015)

PS 452 (2019)

IN A CONTEXT FRAGMENTED BY FAILED (RE)ZONING

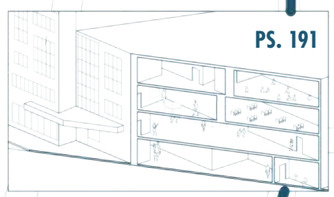


PS. 199



A CLOSE KNIT COMMUNITY OF CHILDREN

IS EXPLODED



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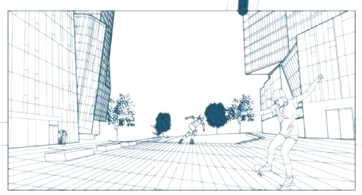
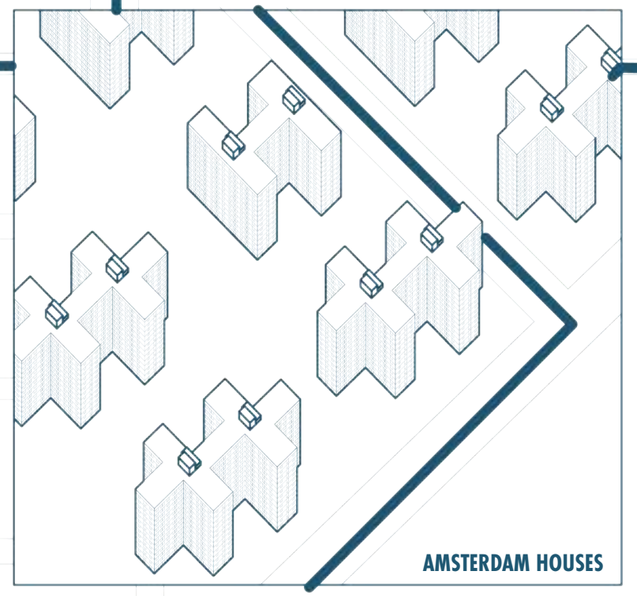
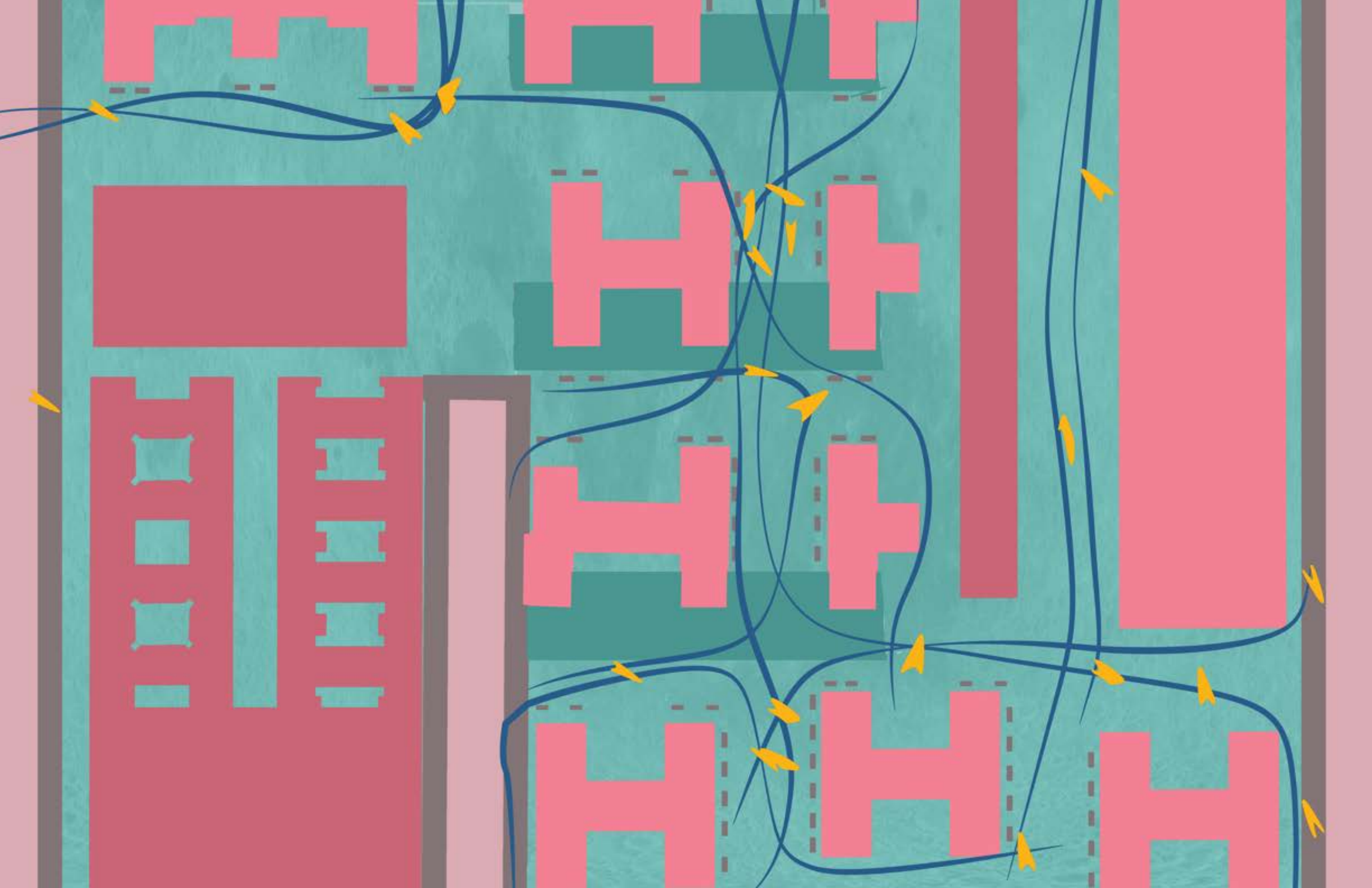
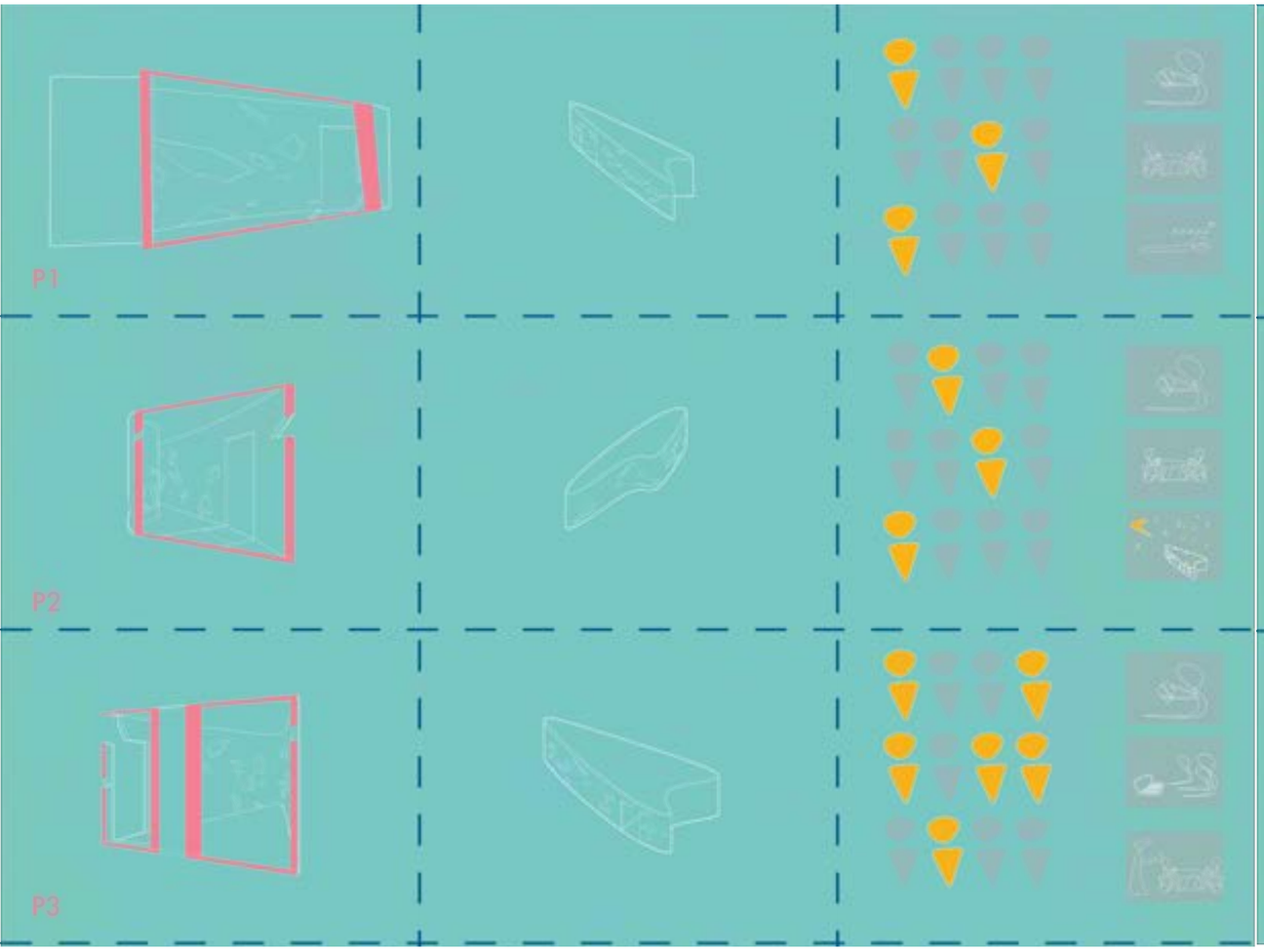
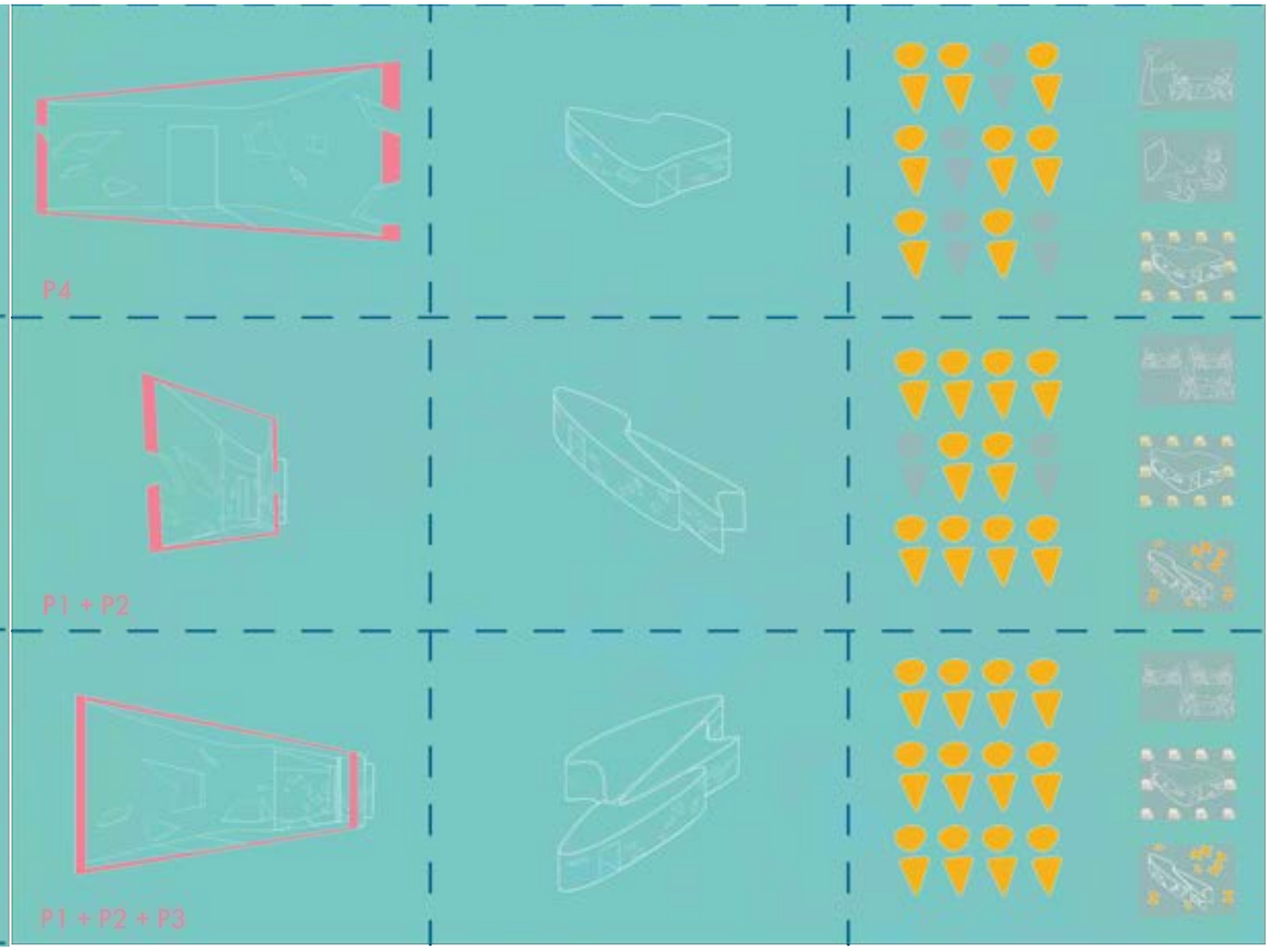




AMSTERDAM HOUSES

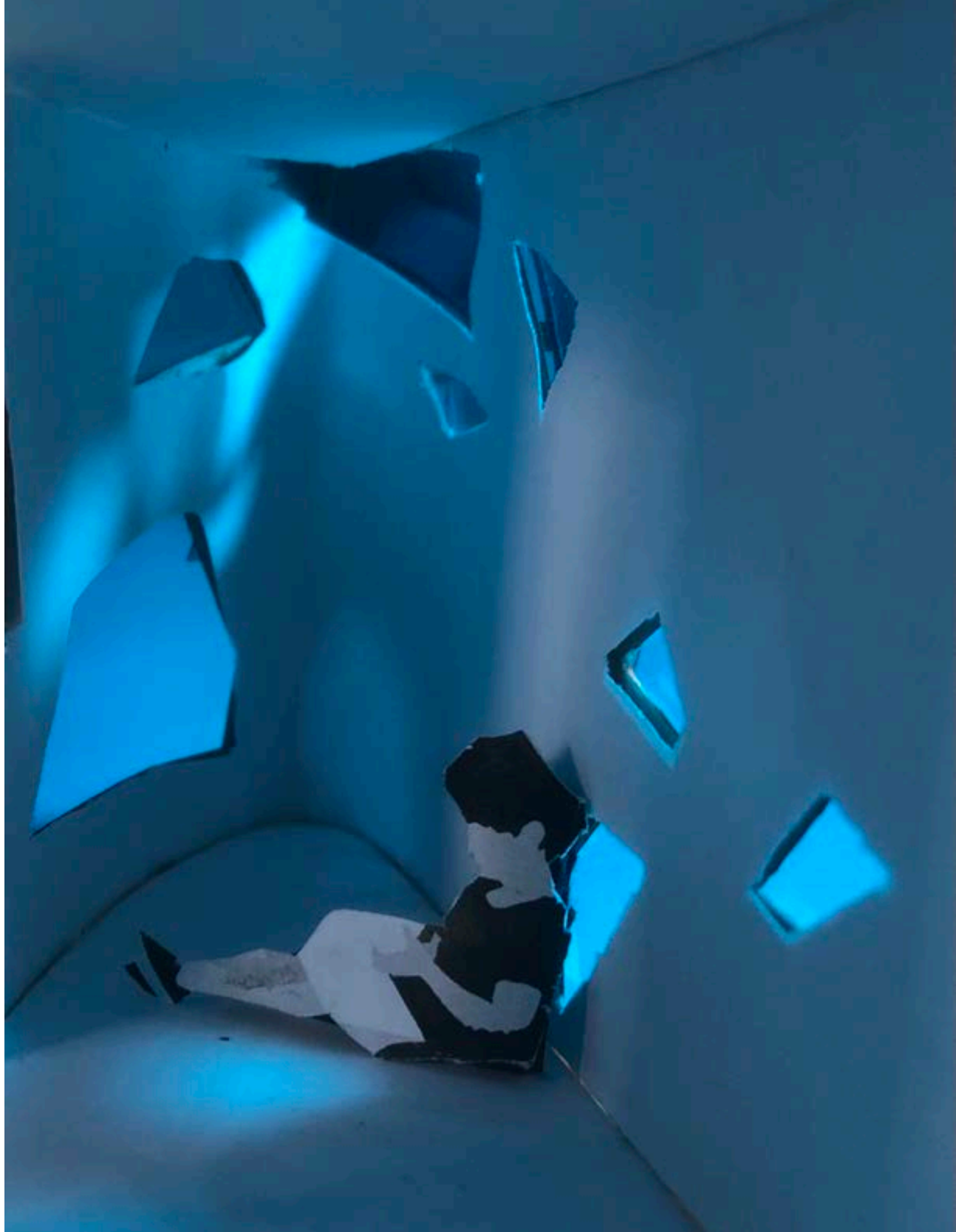


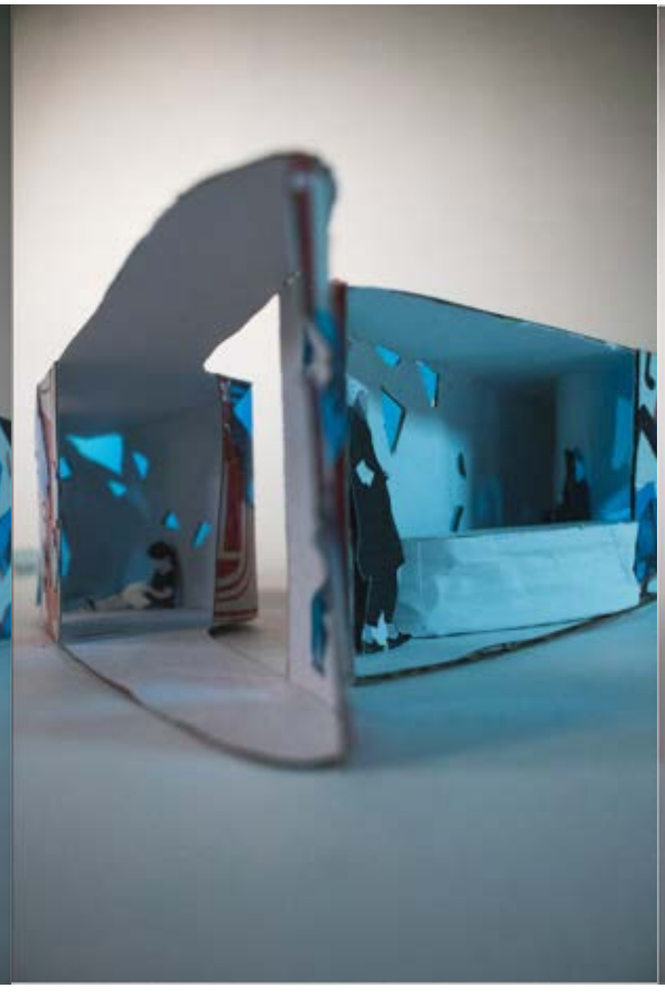




THE MYCELIUM PODS' MODULARITY
ALLOWS FOR MAXIMUM PROGRAMATIC FLEXIBILITY
GIVING BACK AGENCY TO THE CHILDREN AND THEIR COMMUNITIES

MYCELIUM'S MATERIALITY
ALLOWS FOR A LIVING ENVIRONMENT'S LIFE CYCLE
TO FOSTER CIRCULAR, CYCLICAL, AND DYNAMIC ACTIVITIES





MYCELIUM'S SCHOOL
PODS' LIFE-CYCLE AND CONSTRUCTION PROCESS AS PART OF THE CHILDREN'S EDUCATION.

TRUST PODS

AFTER SCHOOL SPACES OPERATING UNDER THE LOGIC OF CHILDREN'S MAXIMUM AGENCY

AMSTERDAM "MICRO-ECONOMY/COMMUNITY"
AFTER HOURS, AGENCY IS TRANSFERED TO THE WIDE
"AMSTERDAM HOUSES" COMMUNITY FOR PRODUCTIVE USE / LEISURE

9:00 AM

Mycelium School

4:00 PM

After School "Trust"
Pods

6:00 PM

Amsterdam
Micro-Economy

SPRING 2022 | Core II |
INSTRUCTOR LINDY ROY

The Soft School

The Soft School leverages the material intelligence of folded form to organize ranges of spatial and sensorial experiences catering to a neurodiverse population. Situated on the island of Manhattan on a site a block from Houston Street; major "aortal" axis of circulation; opposite Sarah D Roosevelt Park; an island of green public space; the school design compresses and amplifies this urban phenomenon; like Bucky Fuller's Tensegrity: "Islands of compression in seas of tension". Through the combination of the geometrical properties and logic of the origami herringbone shape and the range of different materialities offered by fabric a wide range of sensorial experiences emerges creating learning environments that are at once -and alternatingly - hyper-connected and insular.

EXTREME: NEURODIVERSITY

LIMIT: STIMULATION, MATERIALITY, INCLUSIVITY

the school is located on major "aortal" axis of circulation a block from Houston Street; opposite Sarah D Roosevelt Park, an island of green public space;

A site composed of "Islands of compression in seas of tension".

The school’s design compresses and amplifies this urban phenomenon
A site composed of “Islands of compression in seas of tension”.

ZONE 0

ZONE 1

ZONE 2

ZONE 3

ZONE 4

ZONE 2

STIMULATION ZONE	VISUAL BARRIER	SOUND BARRIER
0		
1		
2		
3		
4		

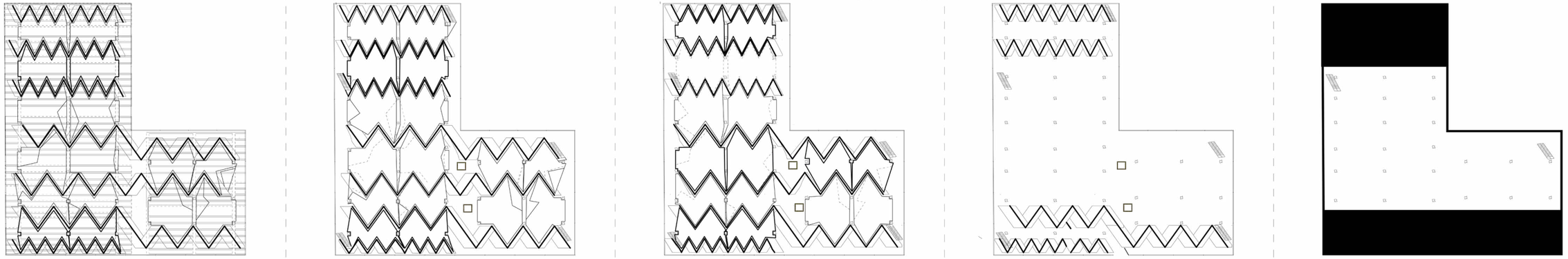
60 - 45 ft

45 - 30 ft

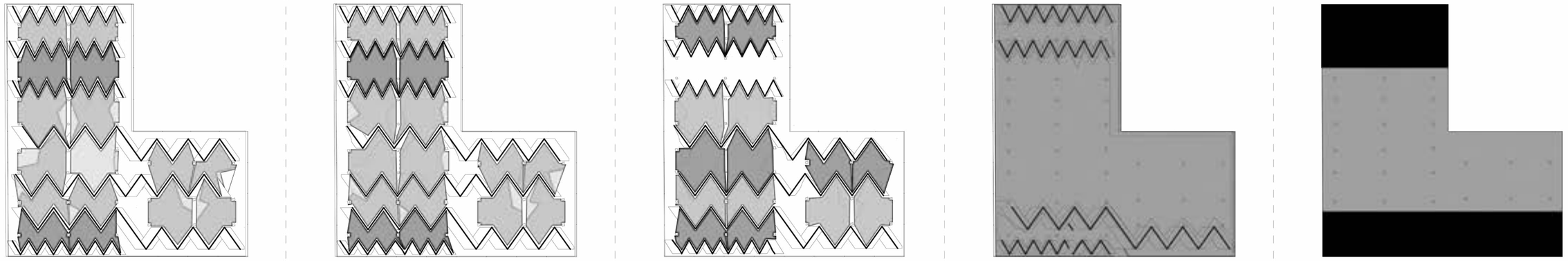
30 - 14 ft

14 - 0 ft

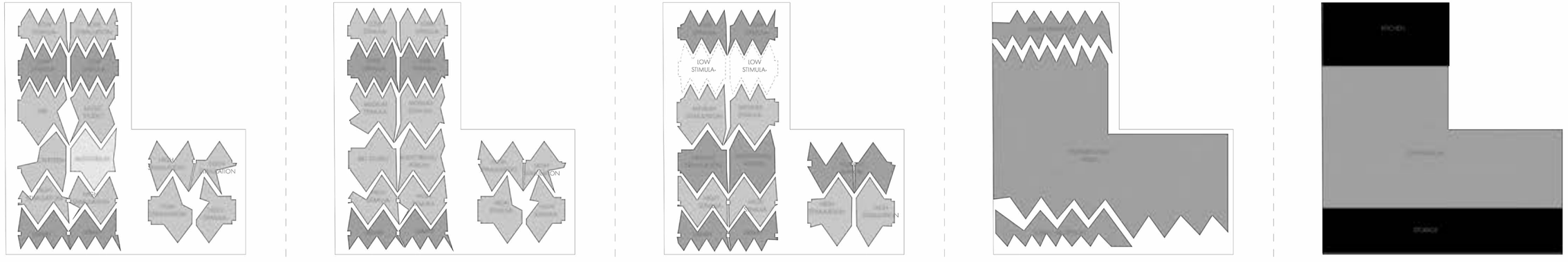
- 20 ft



Plans

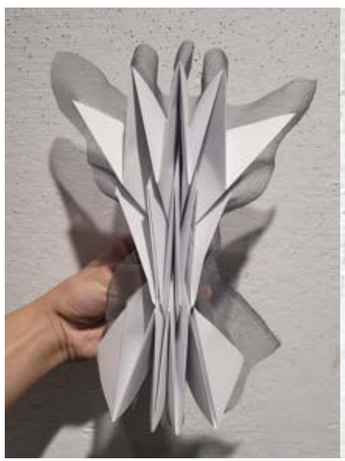


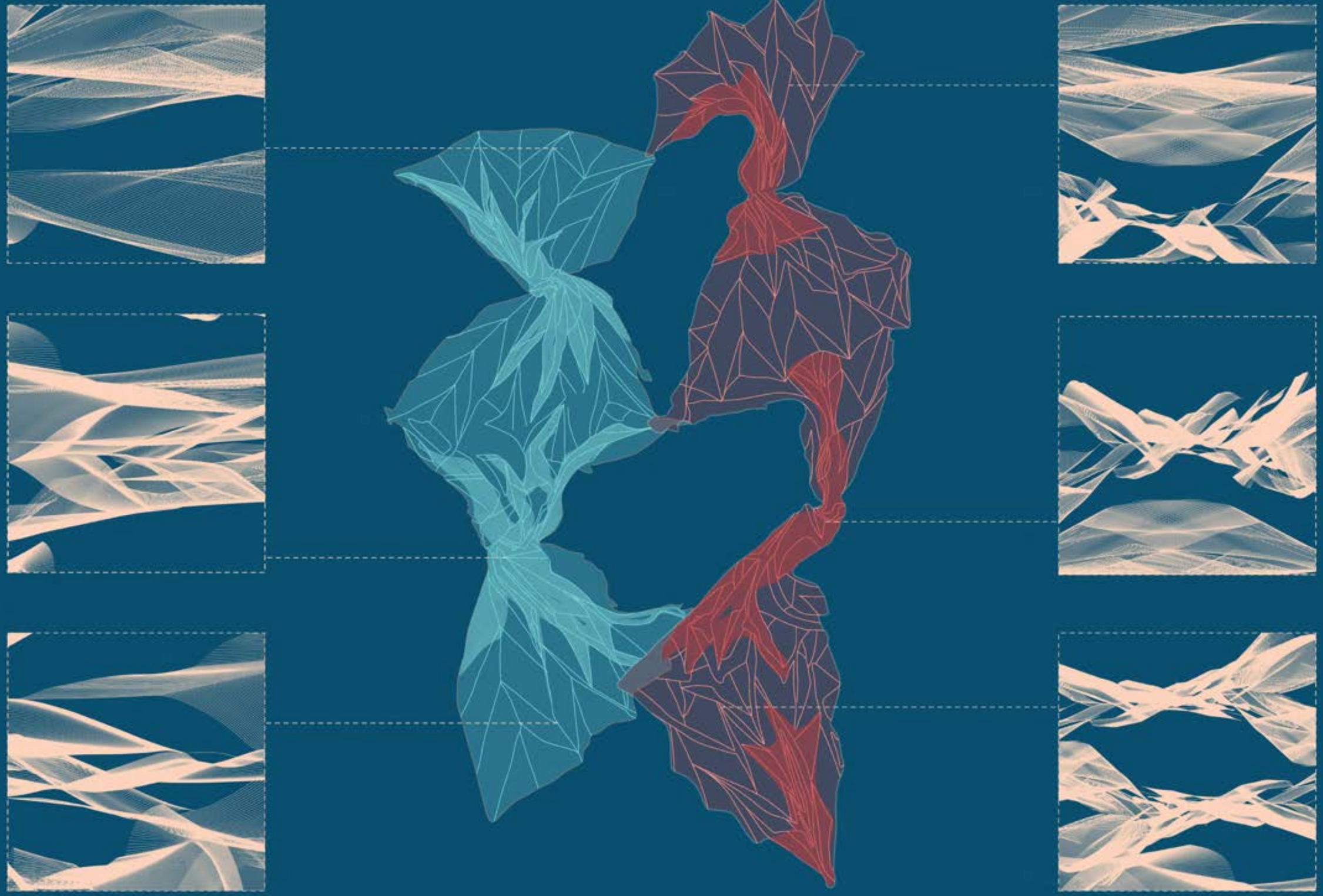
Datum Gradient



Program

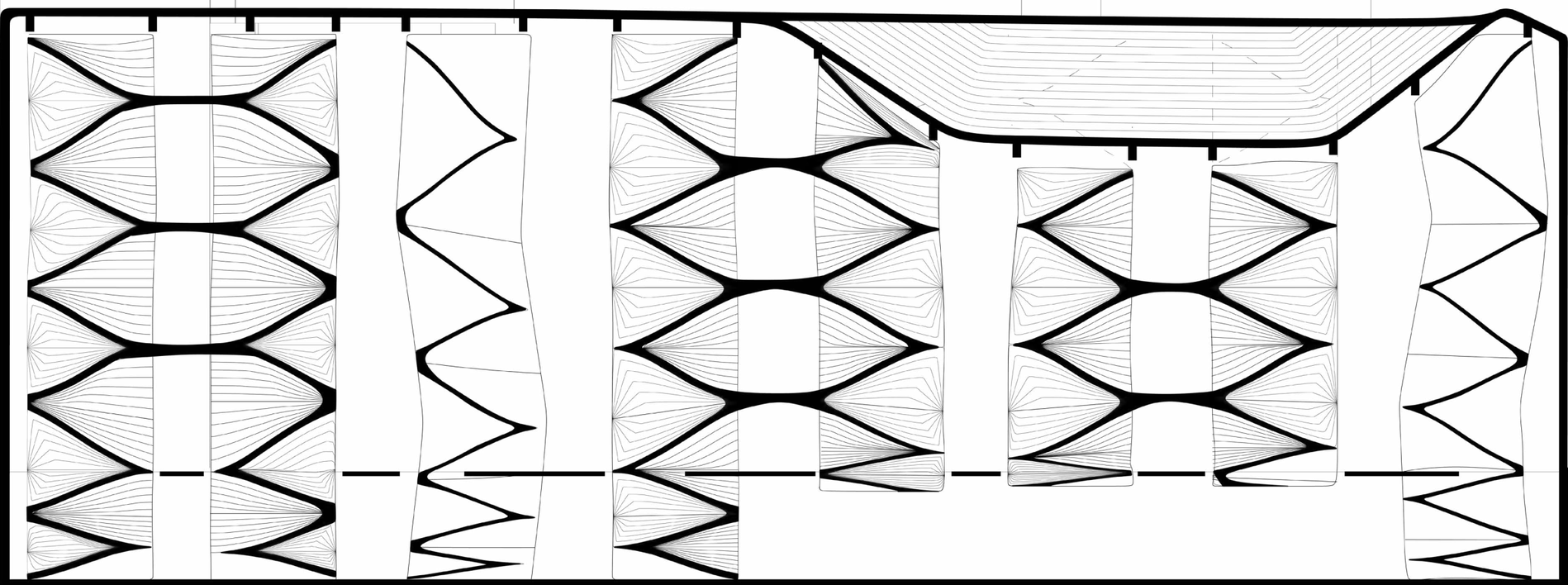
HEAT PRESSED SILK ORGANZA

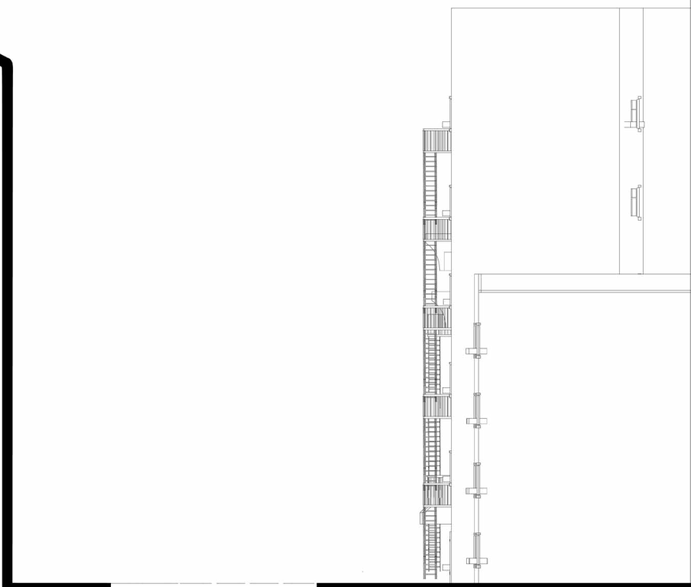


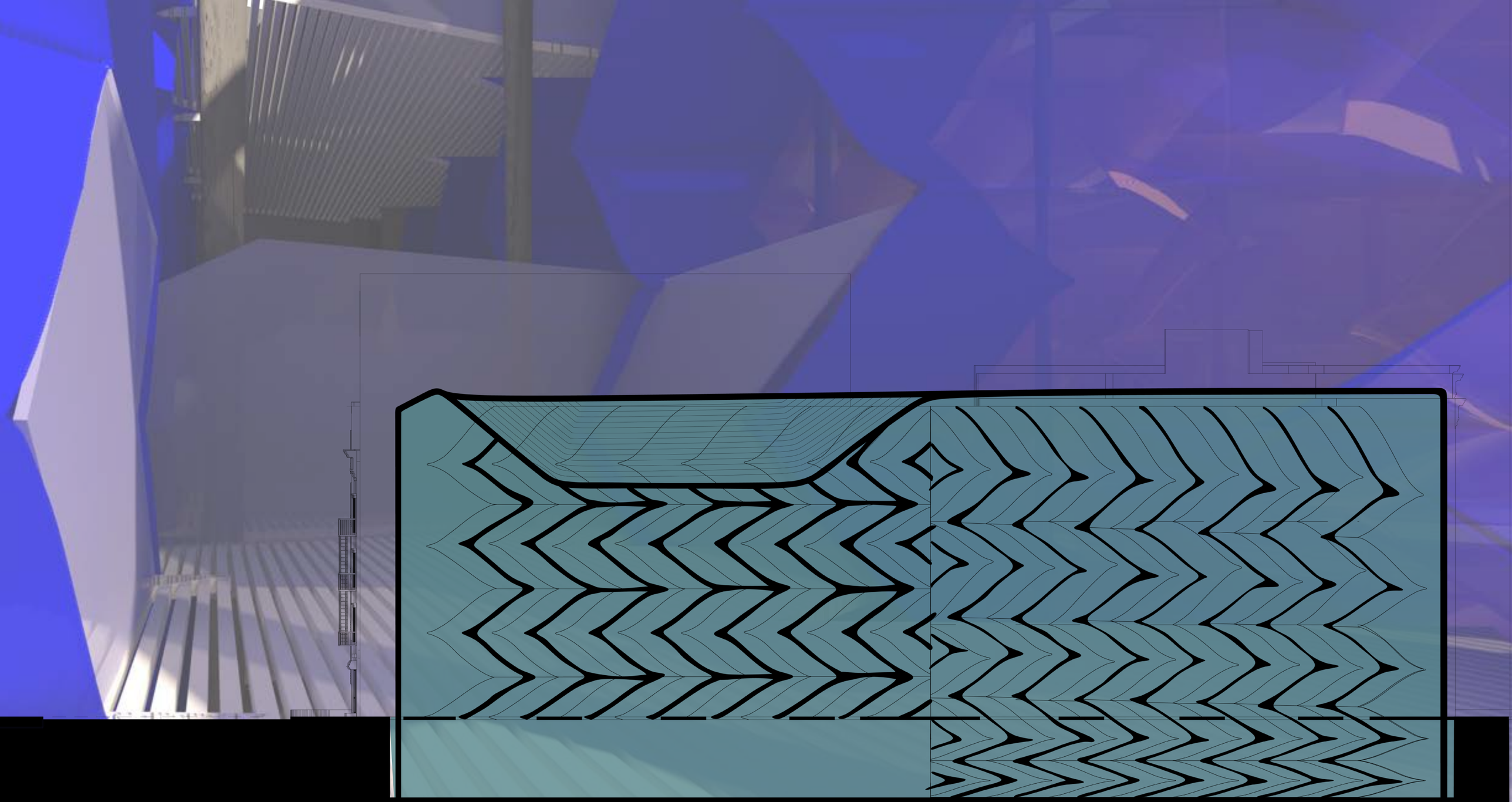


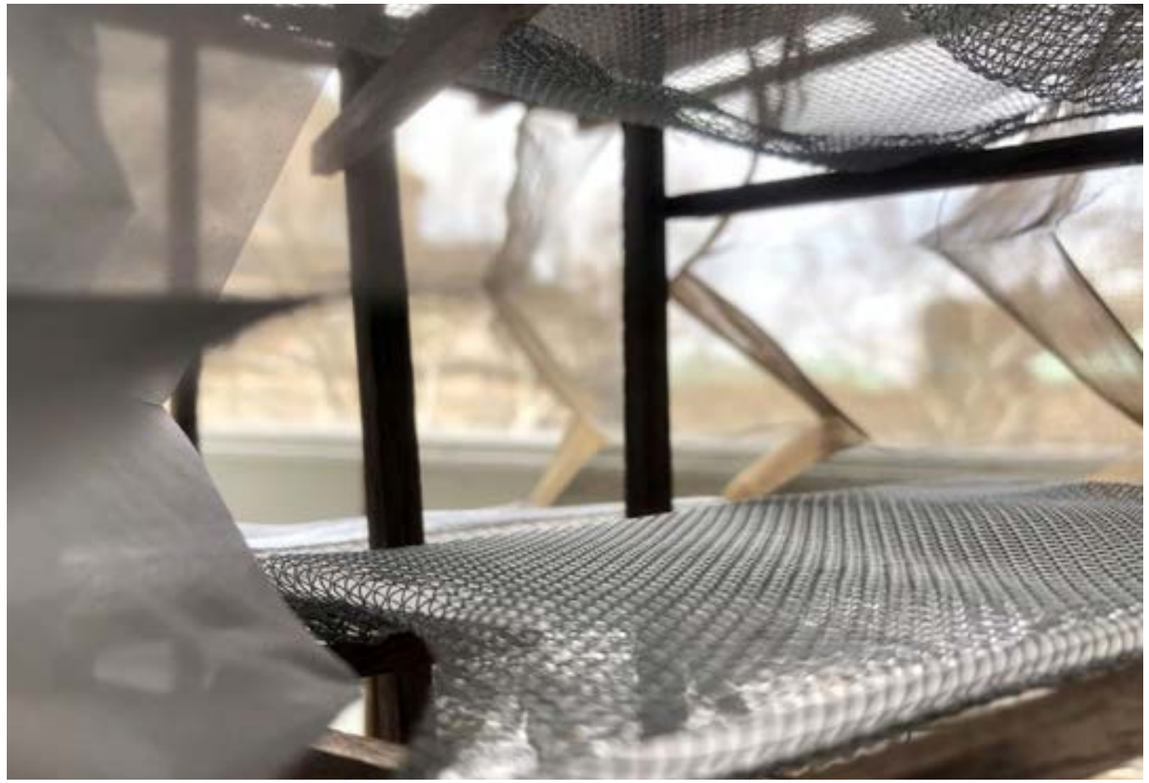
There are no set floors or levels, the geometry of the herringbone creates a spaces where the spacing between the floors is dependent on the angle of the folds of each wall, creating a gradient of visible datums at each point in the building.

The material intelligence of the fabric not only allows for sensorial diversity that caters to a neurodiverse crowd with diverse sensorial needs through the materiality of the fabric, but also through its inherent geometric intelligence which creates diversity in the spatial organization three dimensionally and logically.



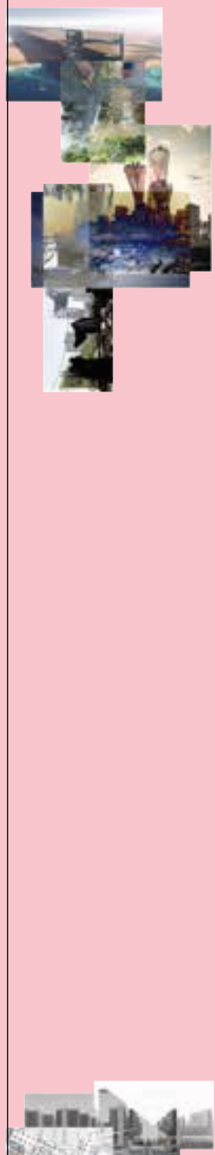






II. EXTREME RADICALITY

ON THE SEARCH FOR THE LIMIT OF PROVOCATION



RADICALITY MANIFESTO

Throughout the 20th century, art and architecture have worked in tandem to respond to extreme situations in extreme ways, by operating in Limit-experience like imagined worlds. We are here referring to Limit-Experiences in the Foucaudian sense, whereby an action approaches the limit of possible experience, to such a point that the subject is dissociated from oneself and is confronted with the Real. We are arguing that today an extreme situation has been reached, which calls once again for extreme methods to be undertaken in architectural and artistic explorations. We are now finding ourselves in the face of ever growing global socio-economic inequalities, immediate and already very palpable climate change consequences, and extreme political instability. We are arguing that these circumstances put the moral responsibility upon us as students operating on a theoretical level in schools, to undertake a limit-like experience exploration. We are trying to do so while being hyper conscious and aware of the risk and history of how some of these movements and methods have been misused in the past, creating totalitarian, destructive, visions and sometimes, outcomes.

DESIGNING FOR EXTREMES

Positive Radicality

Historic Pressures

Negative Radicality

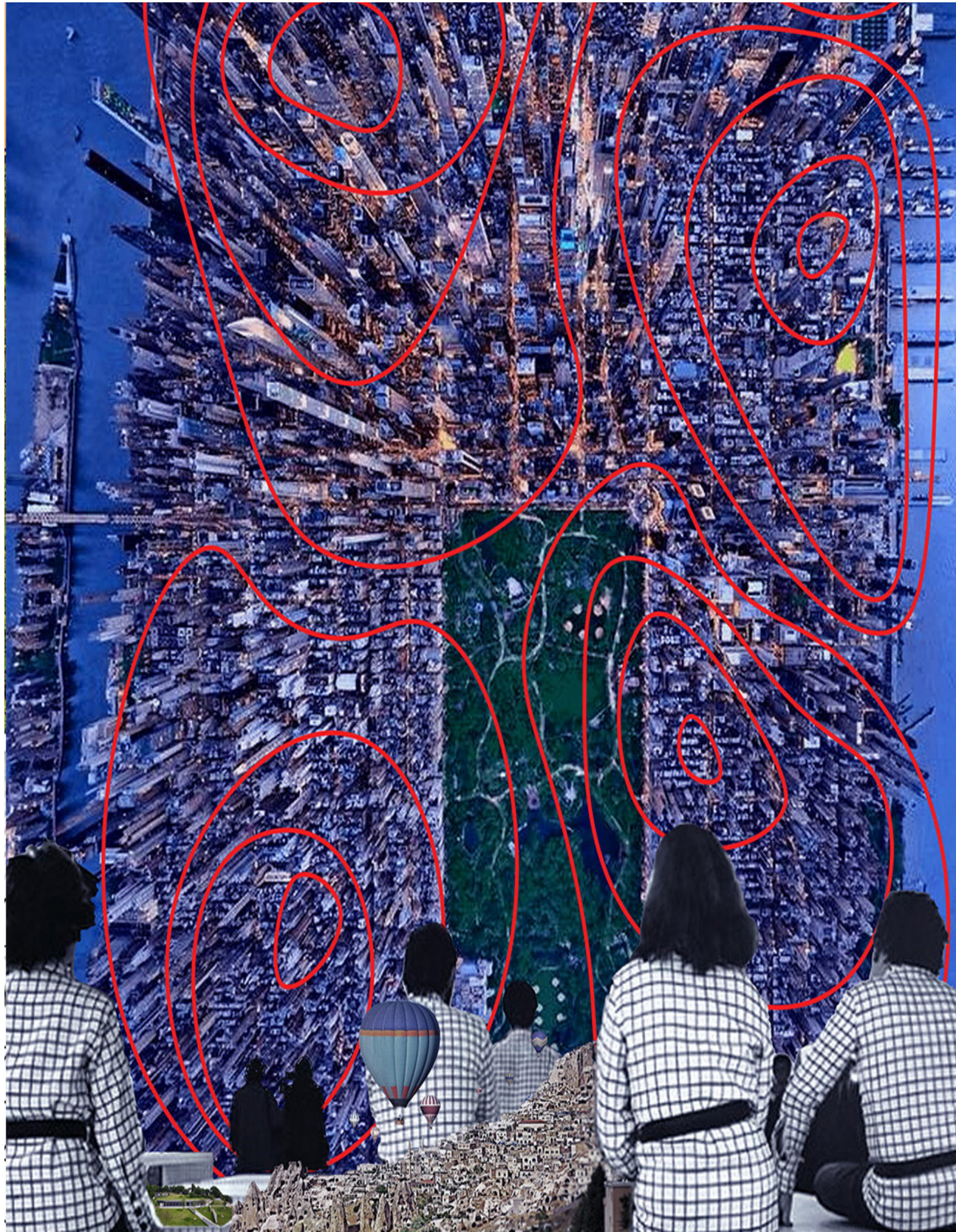
FALL 2022 | Core III | GSAPP
INSTRUCTOR GALIA SOLOMONOF

IN PARTNERSHIP WITH E.J. SHIN

THE MOUNDS

In the face of the imminent climate and housing crises, "The Mounds" aim at being a theoretical exercise in provocation and radicality. Located in the South Bronx by the Harlem River, the site is going to be completely flooded by the year 2100. The project tries developing a new typology for housing that simultaneously maximizes density and open spaces, while addressing the water levels rise.

EXTREME: WATER LEVELS
LIMIT: CLIMATE, DEMOGRAPHICS, FLEXIBILITY



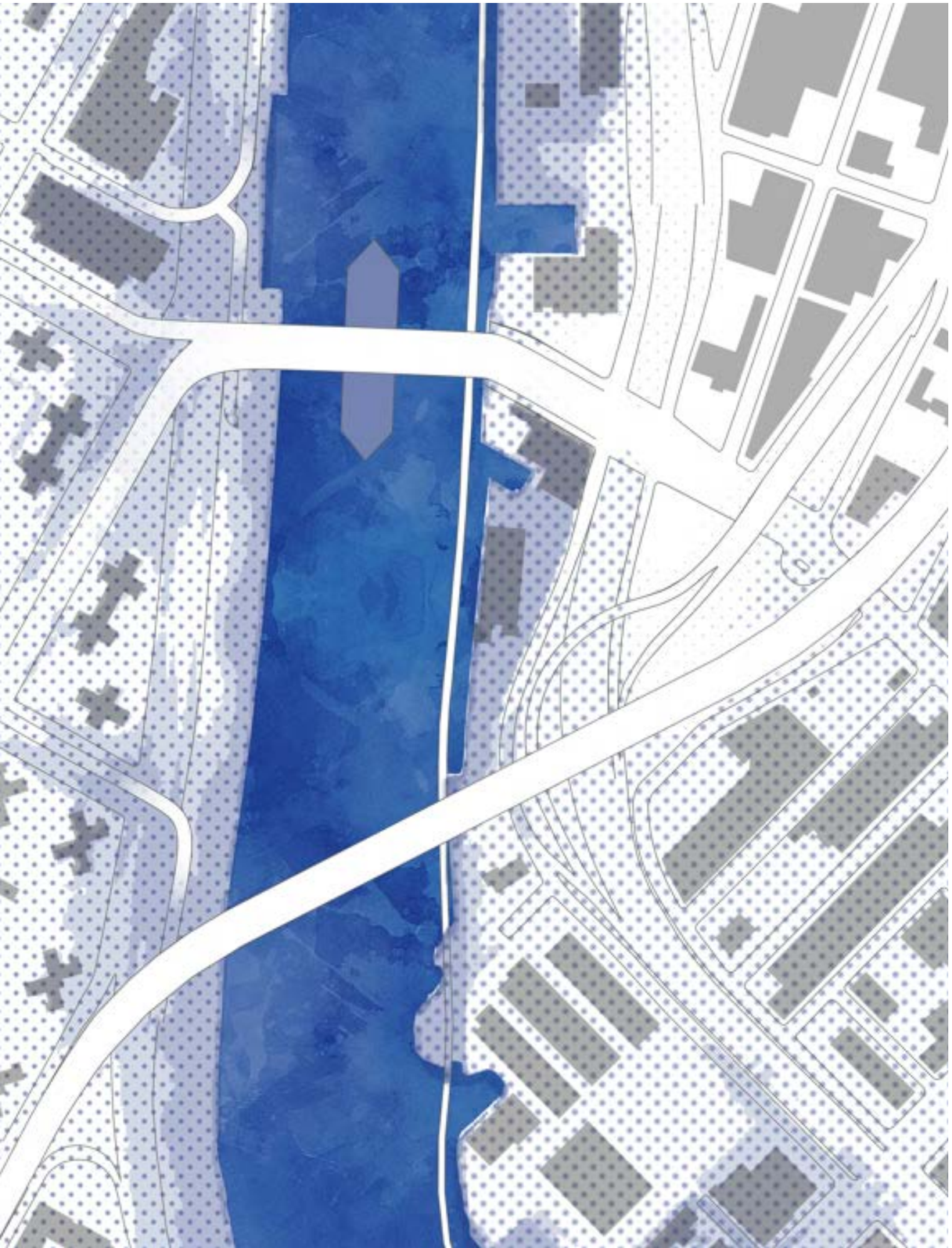
To maximize the number of units the project takes over the entire site, flying over the Major Deegan Highway. "The Mounds" are composed of six cores that allow the concentration of more than 2500 single standard units. The standard units can combine to create larger apartments of up to 5 units allowing occupancies to grow and shrink, maximizing flexibility, and attempting a fluid definition of the notion of "living". The six cores are connected by a mesh spanning the entire site and crossing the river. The mesh allows for both the maximization of outdoor open spaces and the connection of the waterfront to the rest of the community.

THE SITE'S INSULARITY AND ISOLATION CALL FOR THE CREATION OF A MICROCOSM: HUMAN/NON -HUMAN ; ECO-SOCIAL / RESIDENTIAL

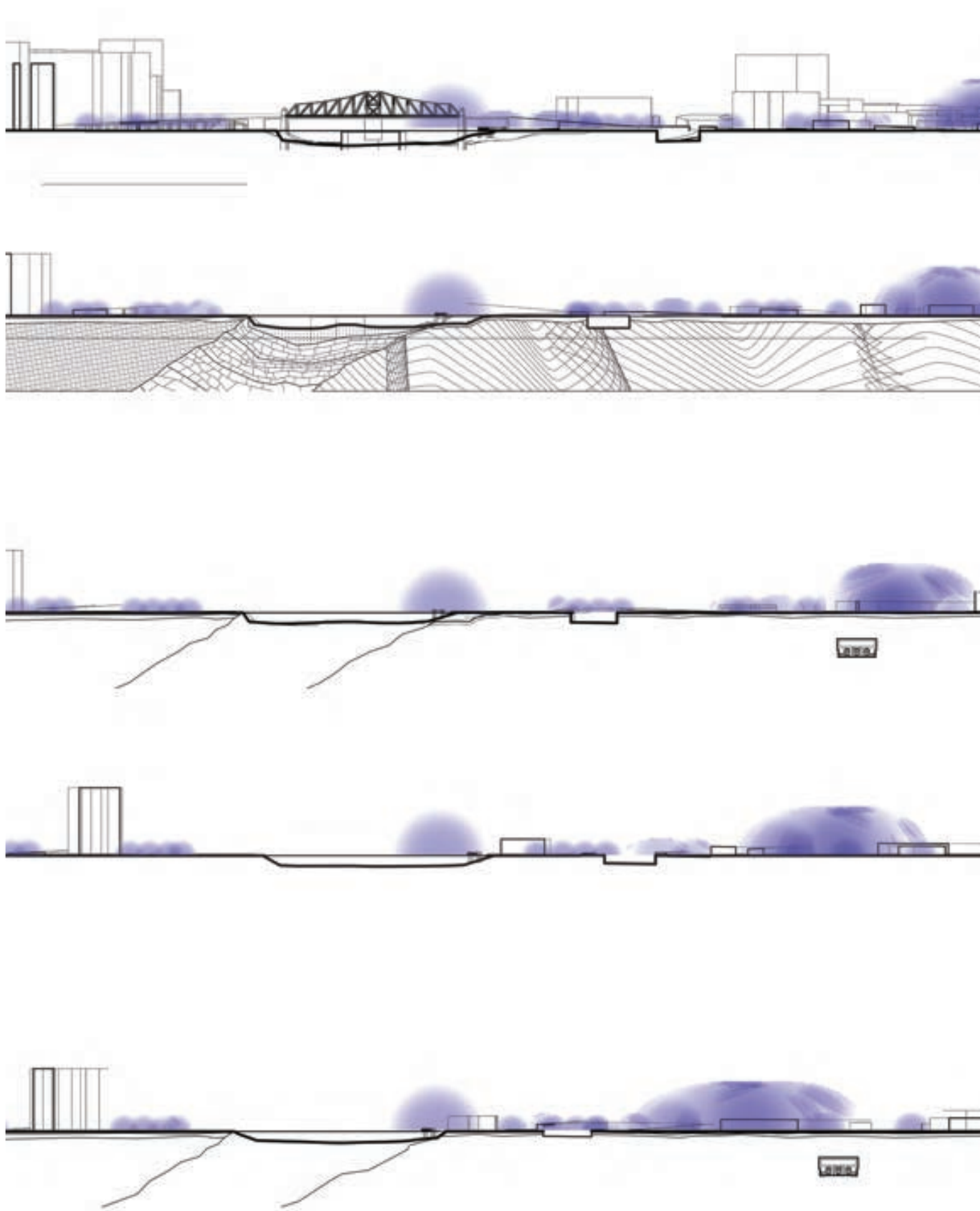
3200 ft
3200 ft
2700 ft
2200 ft
1700 ft
1200 ft
700 ft

- Grocery
- Laundromat
- School
- Culture
- Library
- Hospital
- Firefighter
- Police

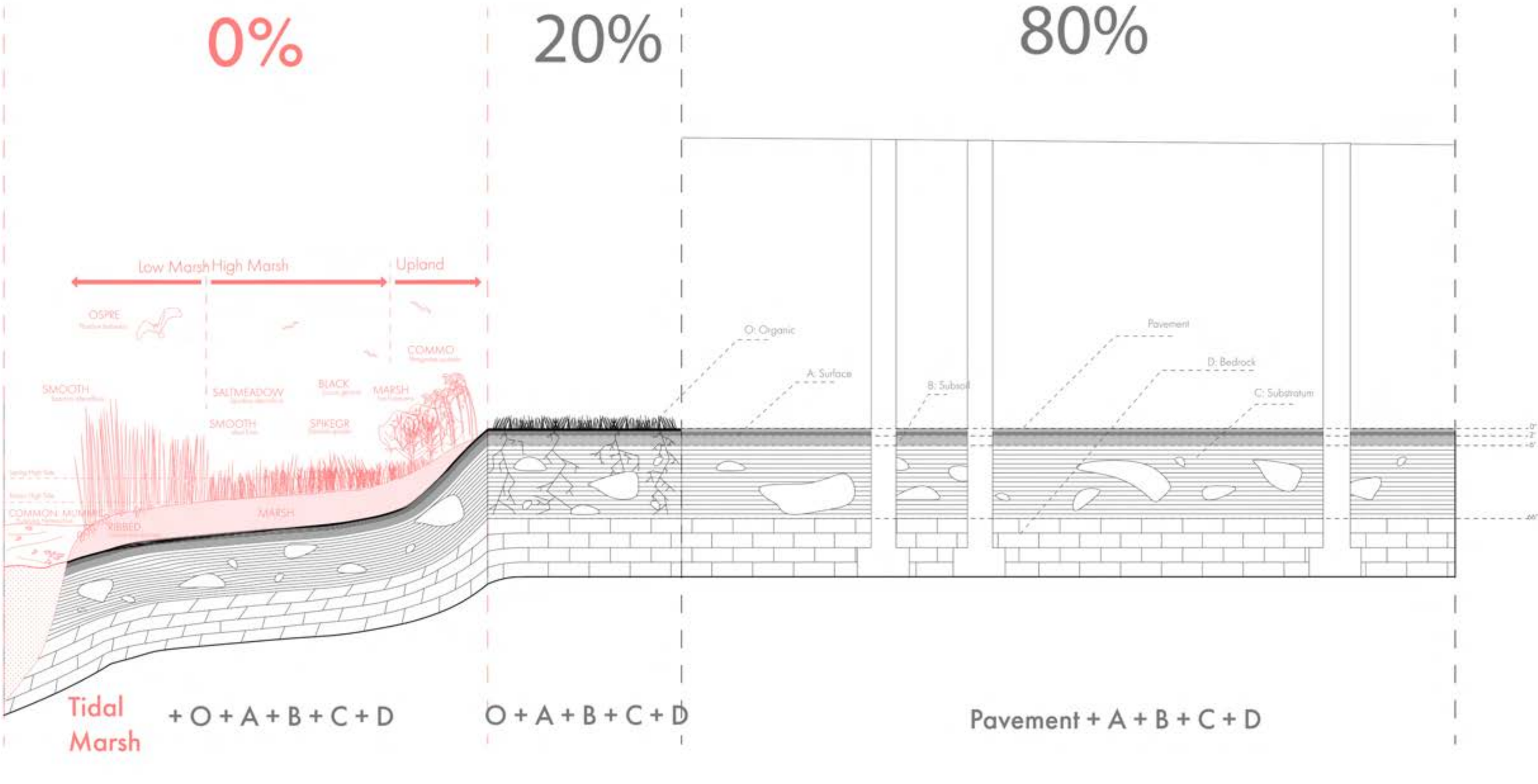
SITE ANALYSIS (A): 100 YEAR FLOOD PLANE X HARLEM RIVER

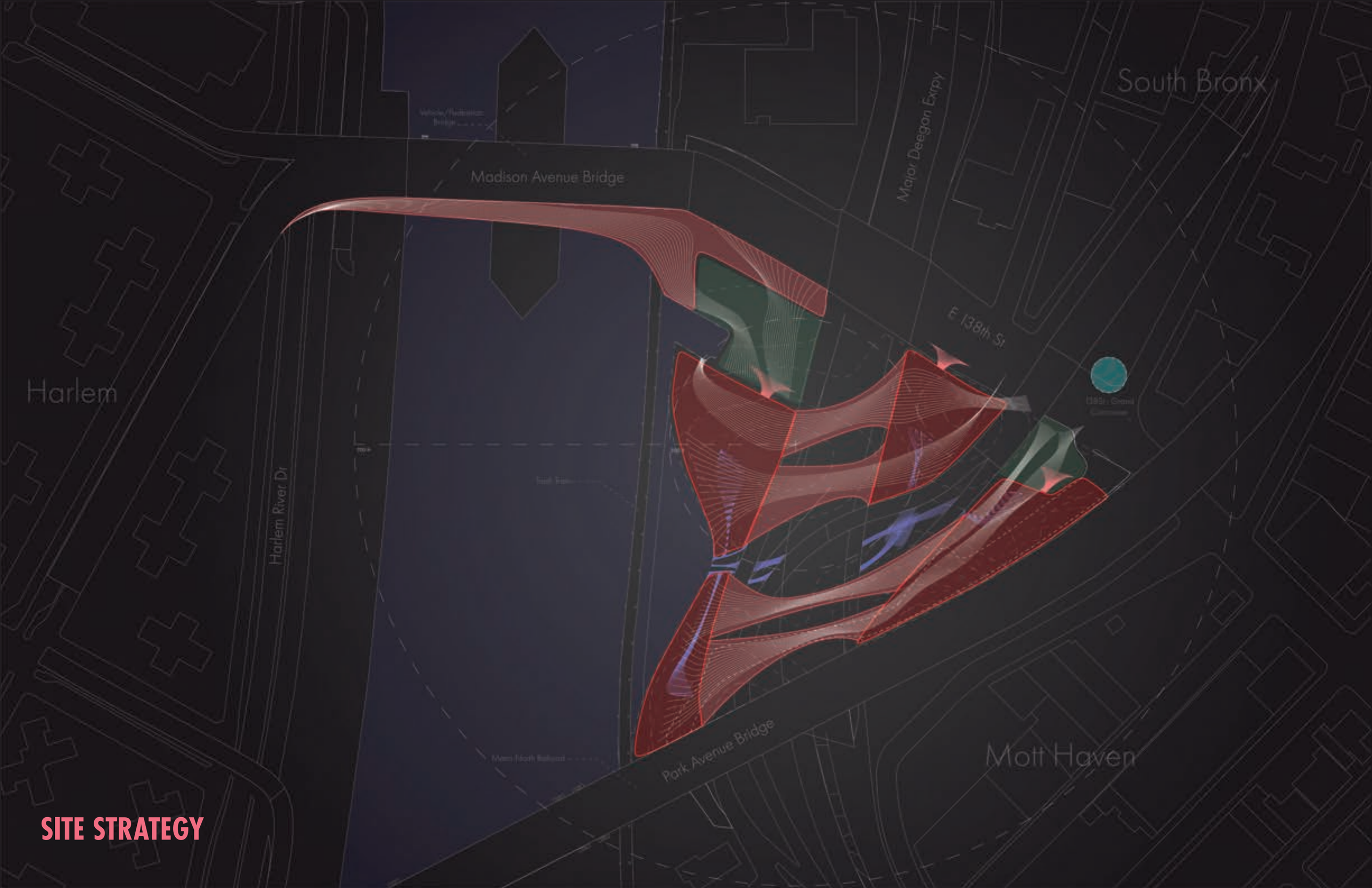


SITE ANALYSIS (B): NOISE POLLUTION



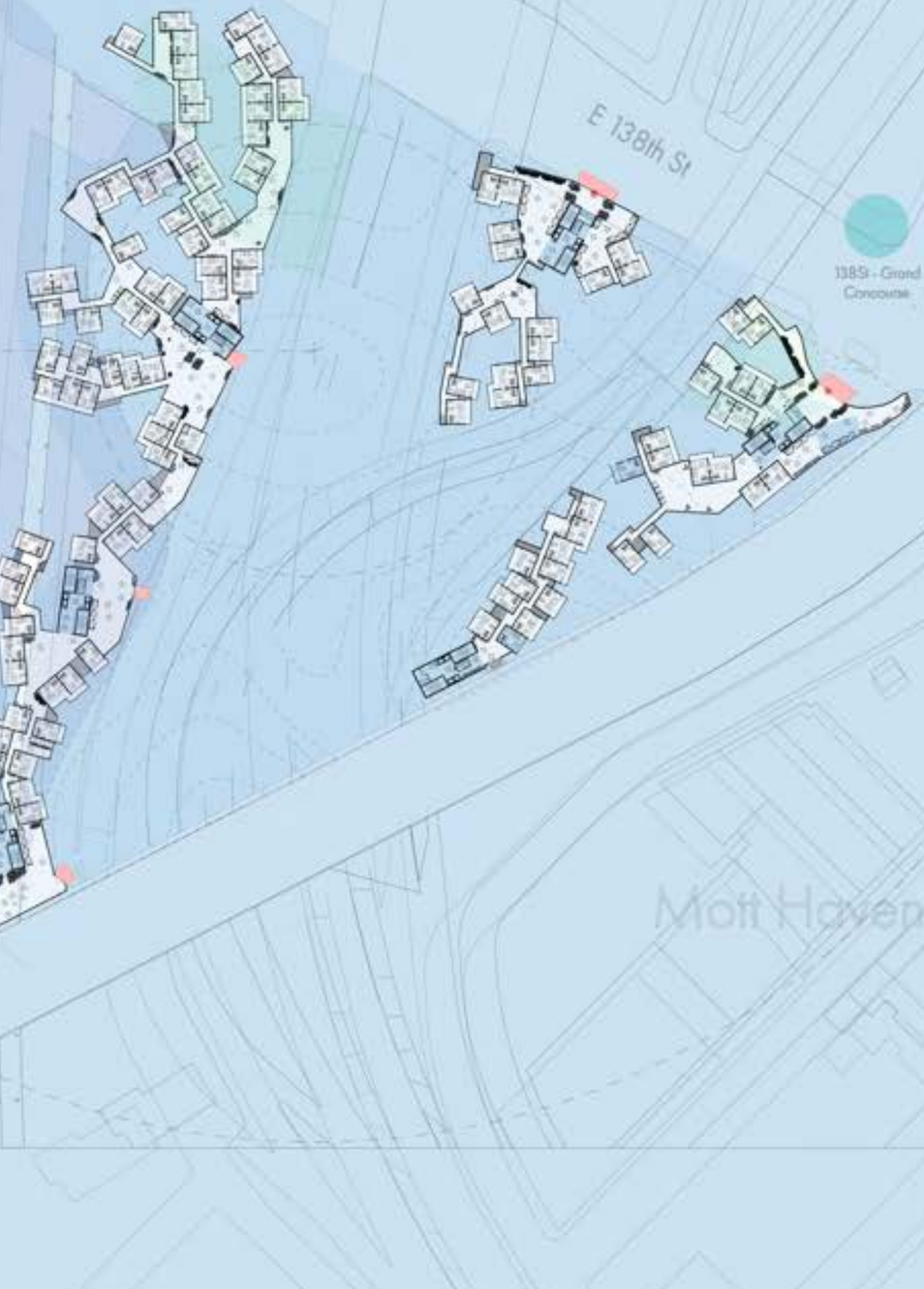
SITE ANALYSIS (C): WETLAND FORENSICS





SITE STRATEGY

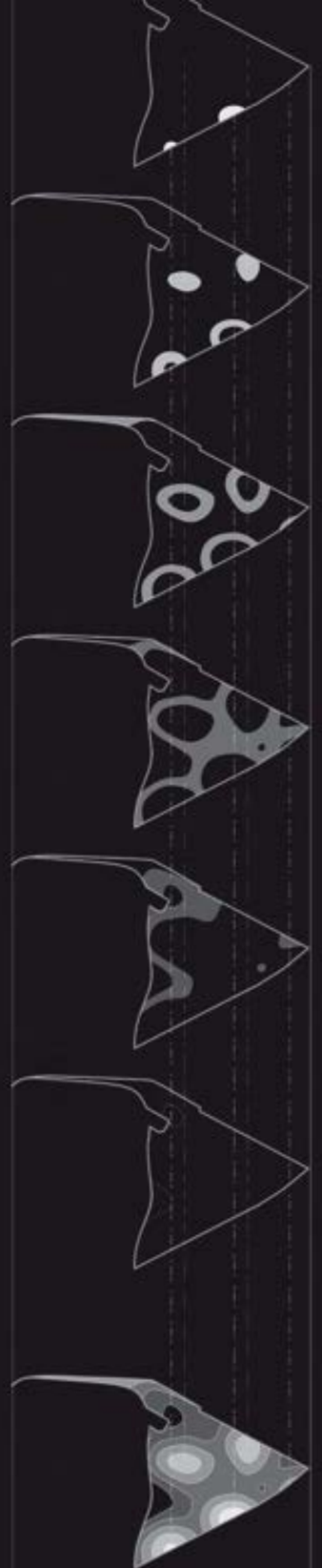
4TH FLOOR PLAN



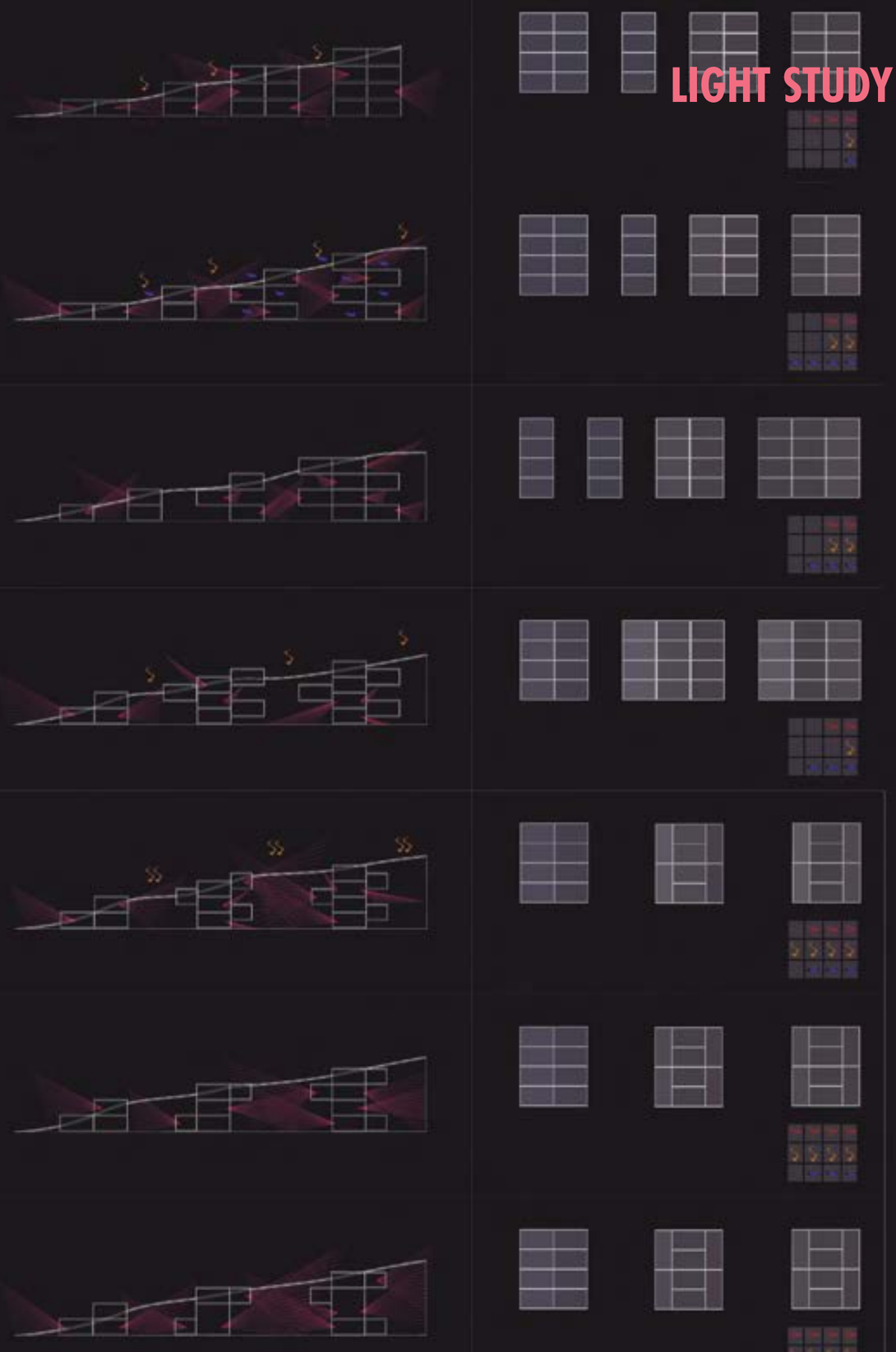
1ST FLOOR PLAN

MASSING STRATEGY

MASSING MODELS

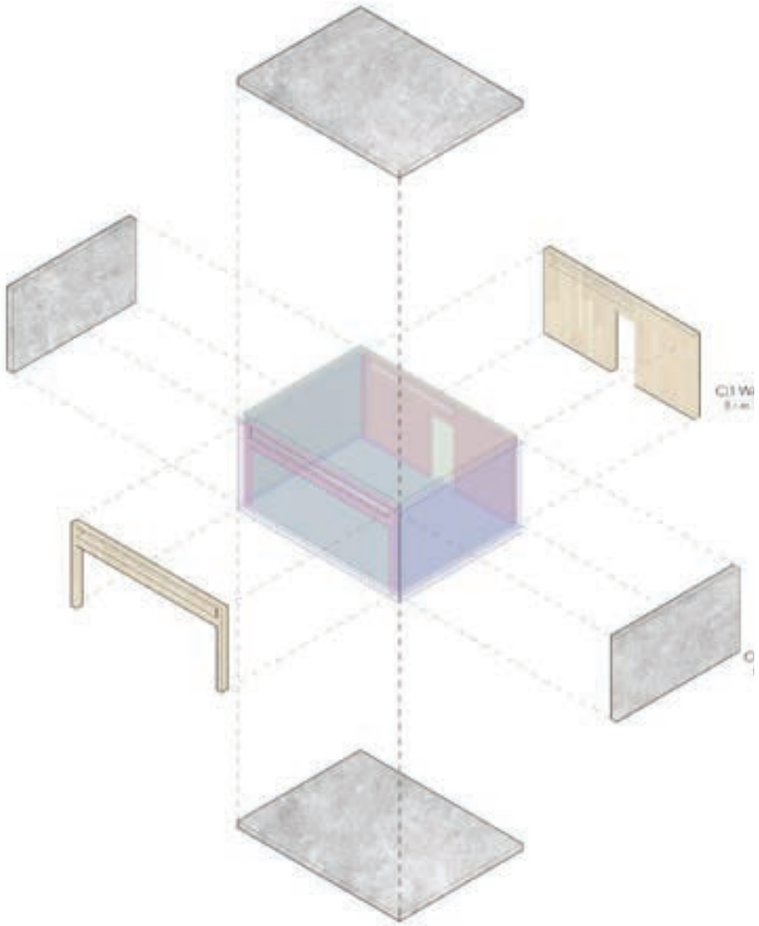


LIGHT STUDY

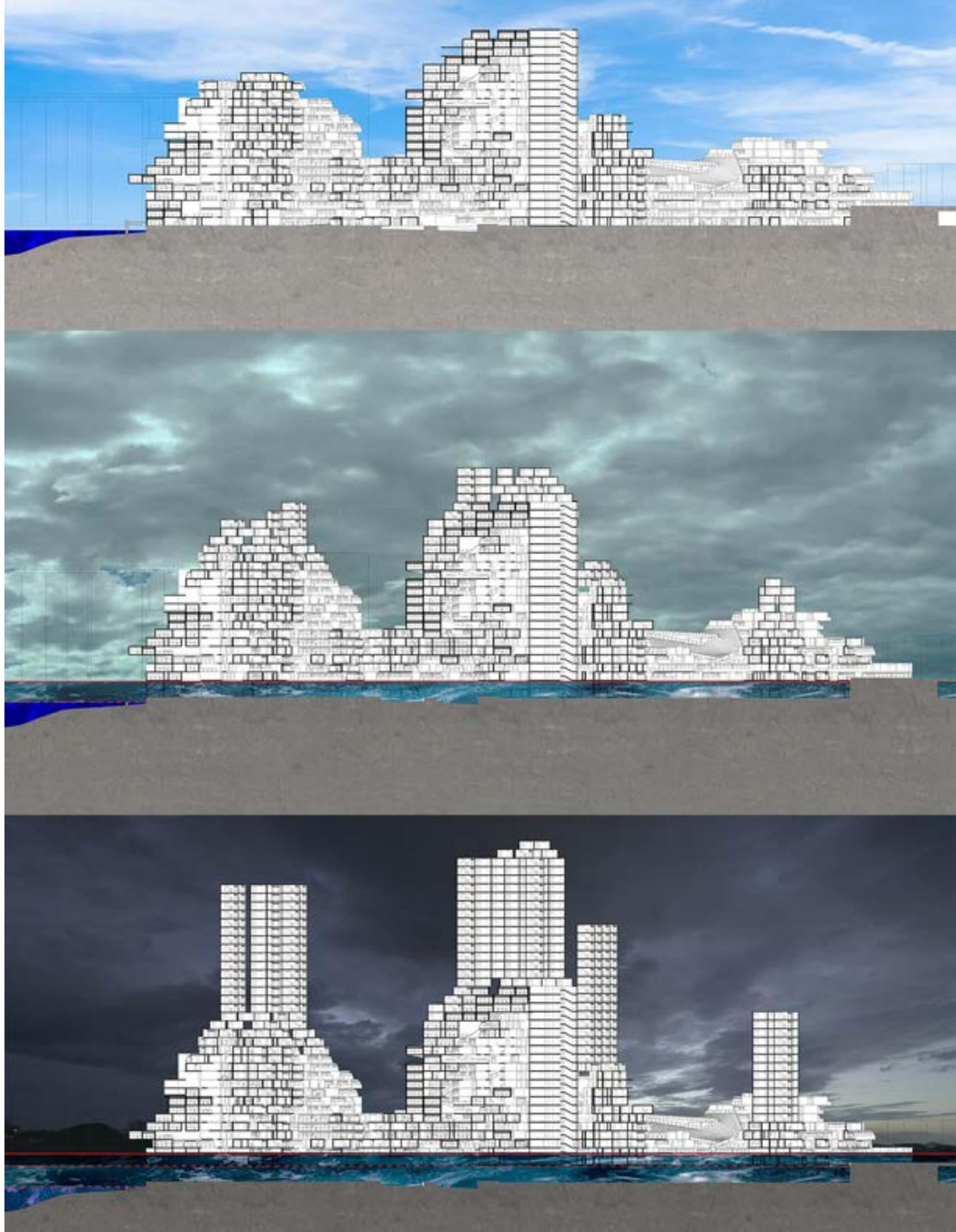


VERTICAL X HORIZONTAL FLEXIBILITY

The Mounds' logic is to embrace future flooding by abandoning lower floors as water levels rise. The bottom units can then be replaced on the Mounds' top. Evolving into a tower that is at once a re-action against and a marquer of the forces that generated it



The units' modularity allows for horizontal flexibility by allowing a mixed mode of occupancy. 300sqft units can combine , grow, and shrink.



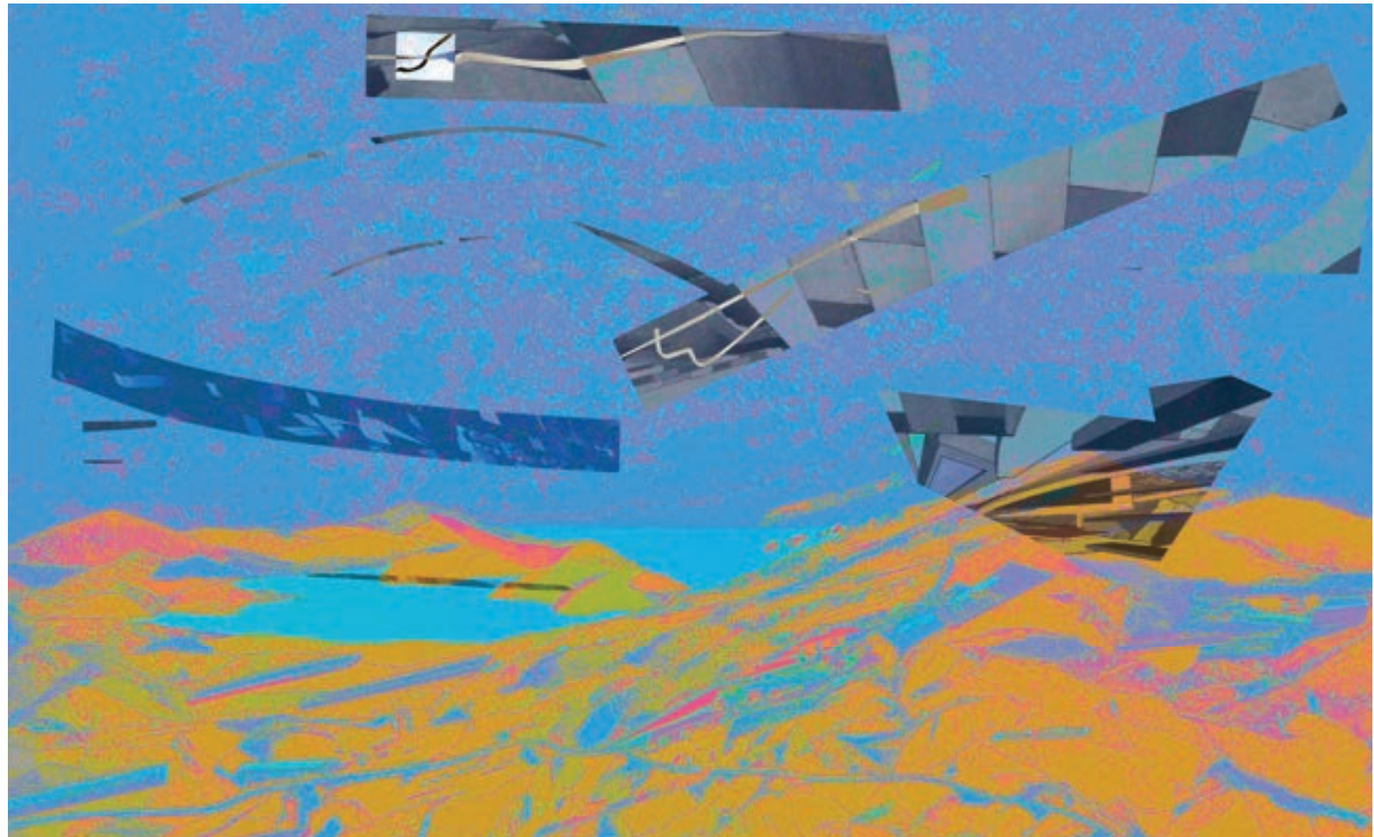
FALL 2022 | ARCHITECTURE APROPOS ART| GSAPP
INSTRUCTOR STEVEN HOLL & DMITRA TSACHRELIA

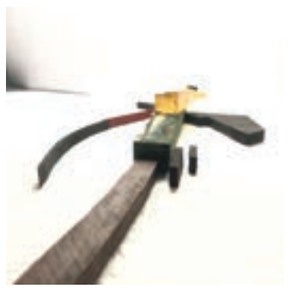
ANALOG ZAHA: THE PEAK

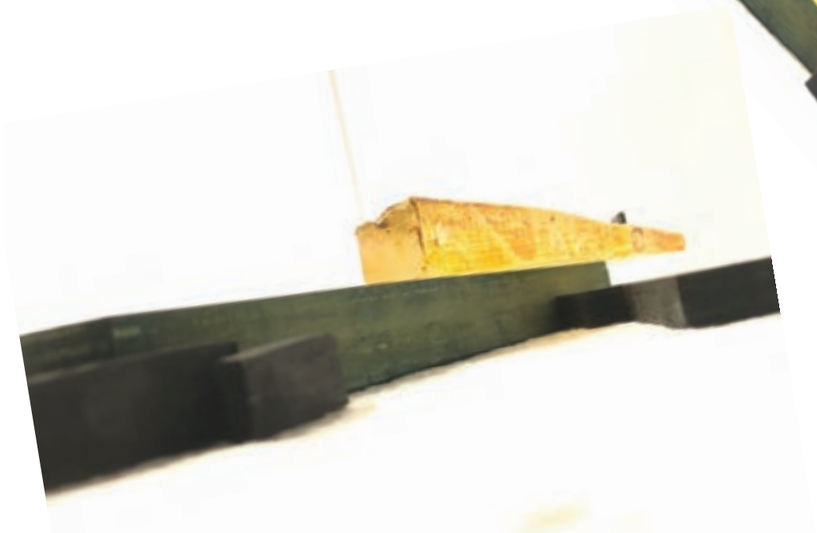
Almost a century ago, Kazimir Malevich prophesied that awareness of space can only happen when we break away from earth, “down with cupolas and heavenly vaults”, he said, “let wedges cut through the bosom of space”.

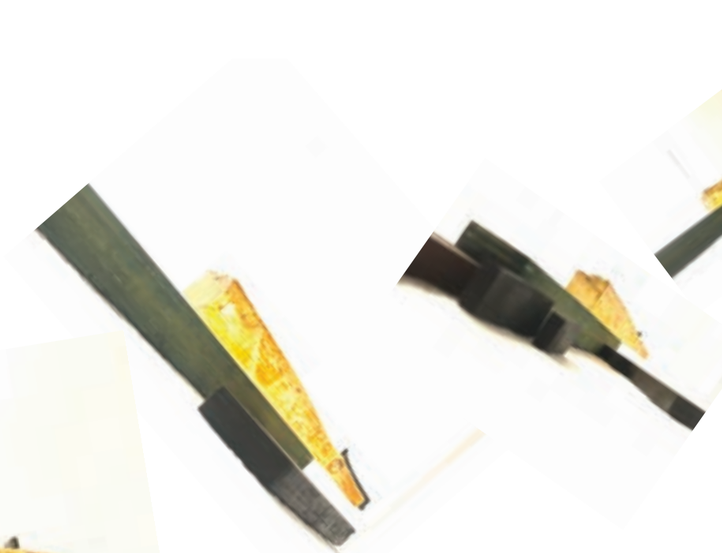
Starting with experimentations in drawing and painting, Zaha Hadid distorted, layered, and exploded space through the use of non-traditional, and extreme projections, perspectives, and drawing techniques. Throughout the decades, this experimentation was so successful that it accidentally became obsolete, the distortion transferred to physical space, as a formal language that was camera ready having a priori outgrown the need for drawing experimentations.

I am arguing that Zaha Hadid’s force is best felt and grasped in her early analog work. It is in her early sketches and paintings that the true essence of her work lies. I am arguing that in her oeuvre it was the journey of discovering a new space through experimentations with drawing techniques and intuitive spatial compositions that holds most interest for architects of my generation to look at and aspire to, as a sort of “modus operandi for a suprematist space”.
As a result, my analysis focused on a reverse chronology of her work. Starting from the last project of which analog work can be found, we go backwards tapping into an evermore abstract and essential work. Going from complex parametric structures, to complex paintings, to the most basic sketch, we find that in reality the complexity of her work is an inverse function of the complexity of the medium, or object.









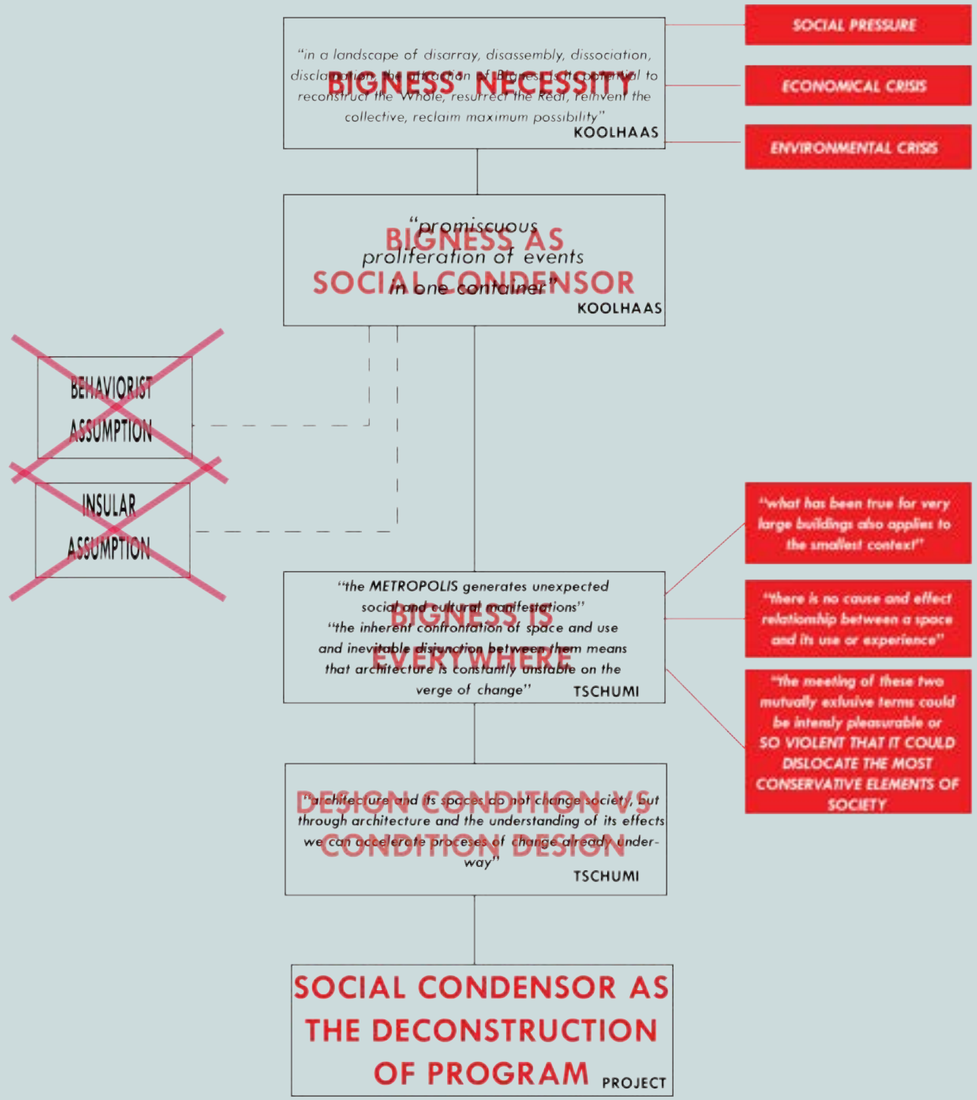
III. EXTREME ECOLOGIES

THREADING THE LIMIT: PROGRAM X ENVIRONMENT

FALL 2022 | THE HISTORY OF ARCH THEORY| GSAPP
INSTRUCTOR: MARK WIGLEY

ARCHITECTURE AND DISJUNCTION: THEORY AS A RETROACTIVELY FITTED MANIFESTO-DISSERTATION

The "relentless affirmation: that there is no architecture without program, without action, without event" is Bernard Tschumi's starting point and conclusion in his introduction to Architecture and Disjunction first published in 1994. A collection of his essays from 1975 to 1990, this book, and particularly its introduction, act as the written mark of a 20-year-long incubation period of thought and practice, that is finally ready to be presented as a coherent piece of theory announcing the future of both architectural theory and practice. This piece of theory aims at redefining architecture and its practice and works multi-dimensionally. On the one hand, it operates on the dimension of the content it presents, which is the simultaneous account of the state of architecture at the end of the 20th century, and the announcement of what's to come for architecture as a practice, theory, and most importantly as a form of knowledge. When looking at the structure of the reasoning and of the text, one quickly realizes it works in the manner of a mathematical demonstration, or philosophical dissertation in the French Lycee tradition. This duality renders this piece of theory as both a precise demonstration or dissertation of claims supported by references and concrete examples, and a manifesto. I am arguing that Tschumi uses the introduction of his collection of essays as the grounds of demonstrating and prescribing his theory while simultaneously using the form of the text itself to emphasize its contents and even to propose a modus operandi.



This dance enables Tschumi to not only advocate for a new "dynamic" theory of architecture and its practice with horizontal descriptions of these ideas. The structure of the text itself reflects the form of the theory which is a dynamic one of constant intuitions, followed by precise, forensic, examinations that lead to their establishment and adoption as axioms which are in turn claimed polemically and subject to the examination once more. This creates a self-actualizing theory by virtue of its form of simultaneous philosophical dissertation and retroactively fitted manifesto. In this way Tschumi not only presents a theory and prescribes its findings in this piece of writing, but gives us through its structure, its modus operandi.

Spring 2023 | Adv IV | GSAPP
INSTRUCTOR RACHELY ROTEM

MARSH(O)POLIS

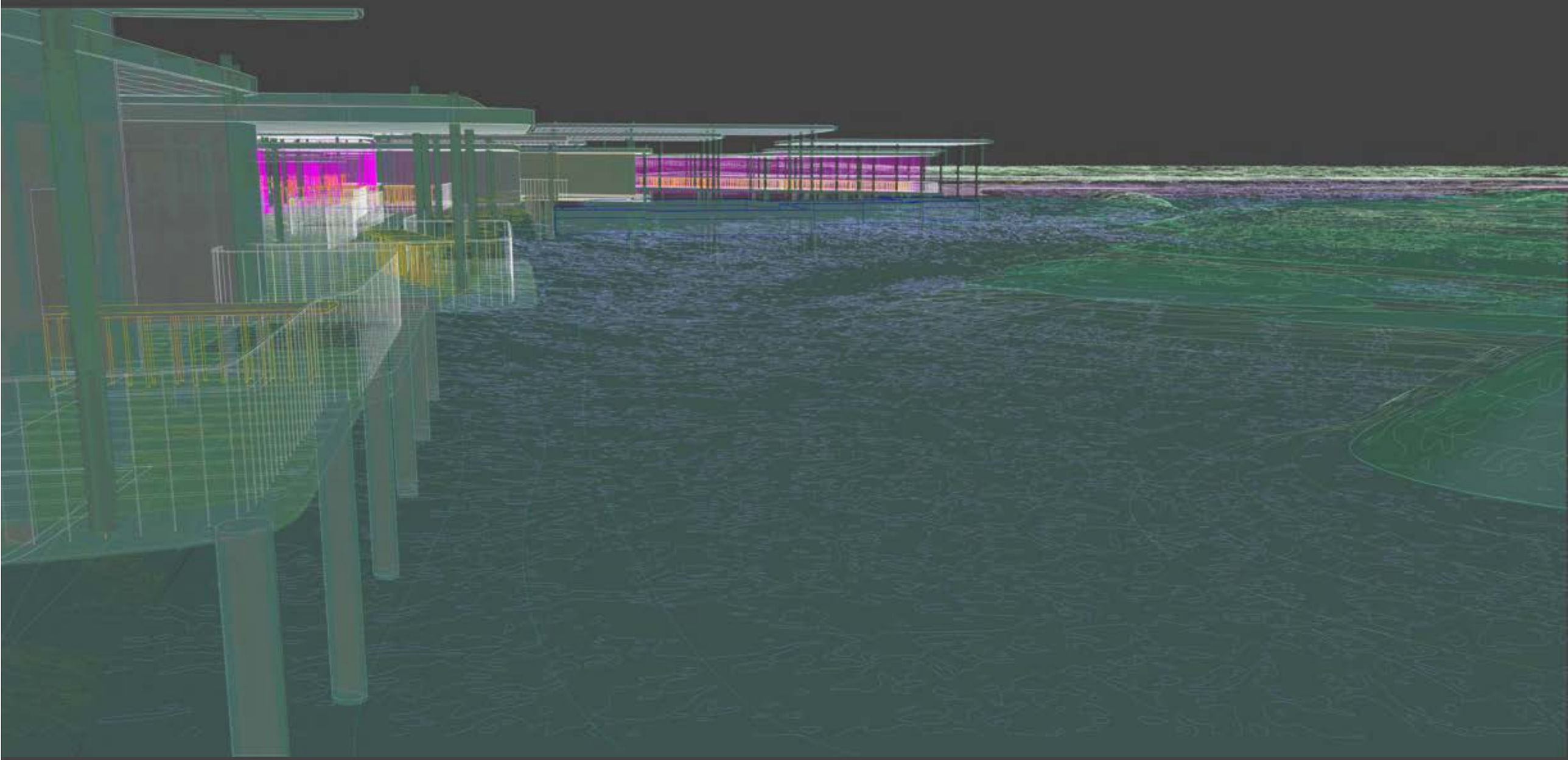
Marshopolis is a water treatment plant that acts as an event and ecology condenser.
Located in the Northern part of the Southend neighborhood of Bridgeport CT, the site is a vacant lot of 800 by 600 ft which used to be the grounds of the Seaside Village Homes residential complex which was demolished in 2012 after Hurricane Sandy hit the area. It is located right by the Cedar Creek Reach which connects it and the City's western water treatment plant to the long Island Sound.
The Project attempts at complementing the western water treatment plant facilities by offering secondary treatment to the excess water, helping lower the occurence of sewage overflow which has been plaging the south end neighbourhood of the city for decades.

As a by product of this strategy, Marshopolis attempts at becoming an event condenser. In other words, the project tries to create a space that would dynamically engender spontaneous, continuous, and intense events, in symbiosis with the natural ecologies created.

EXTREME: WASTE

LIMIT: ECOLOGIES, EVENTS, UNCERTAINTY

Marshopolis uses the entirety of the vacant lot as a marsh ecology water treatment plant, (re)introducing marsh ecologies in the urban fabric. The use of this large plot as a marsh ecosystem bassin will offer a flood and hurricane buffer to the immediate residential areas surrounding it.



CLAPPER RAIL

WILLET

OSPREY

SALT MARSH SPARROW

SEASIDE SPARROW

EASTERN OYSTER

RIBBED MUSSELS

BLUE CRABS

BLACK NEEDLE RUSH

SMOOTH CORDGRASS

PHRAGMITES

SALT MEADOW HAY

SALT GRASS

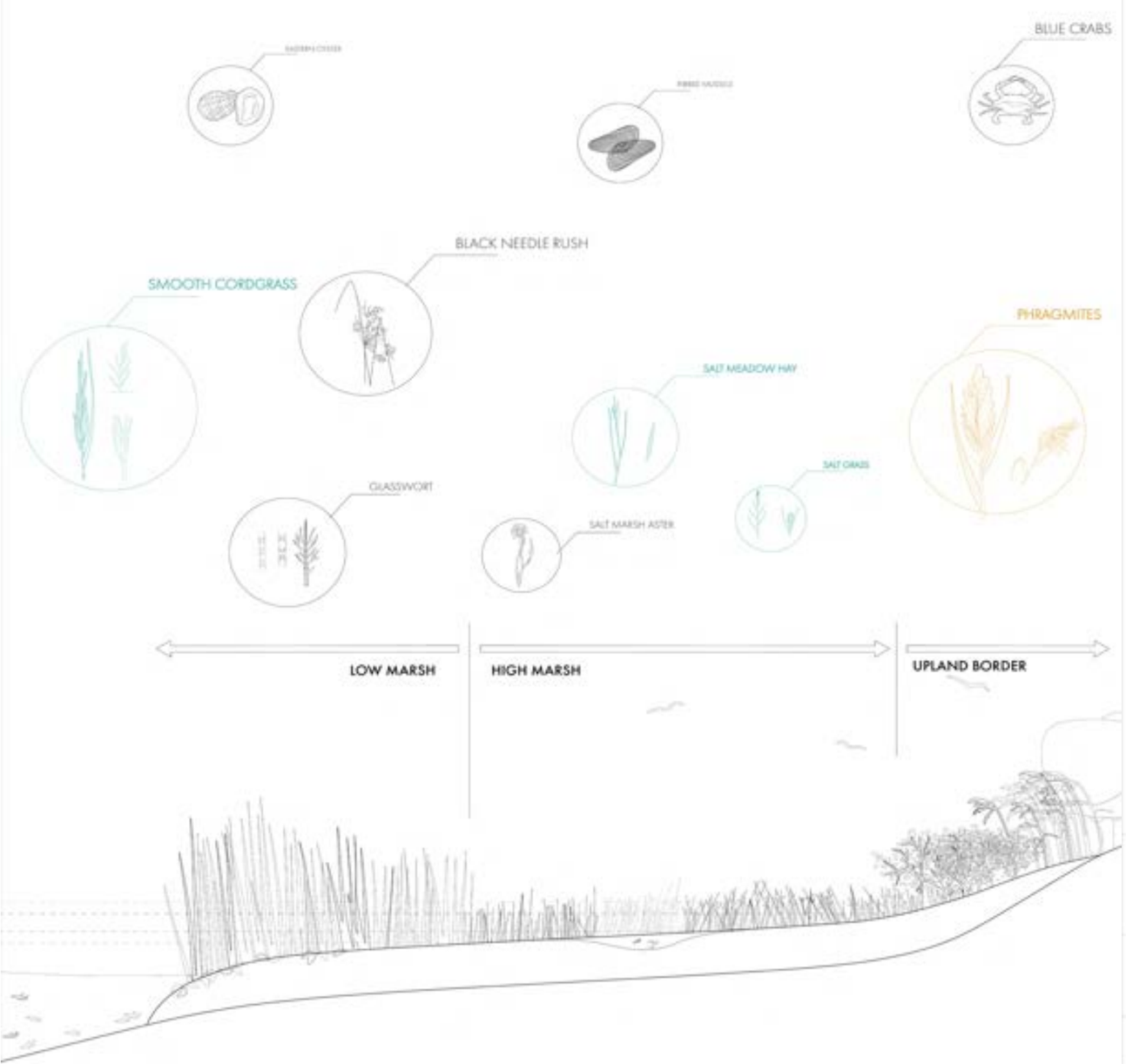
GLASSWORT

SALT MARSH ASTER

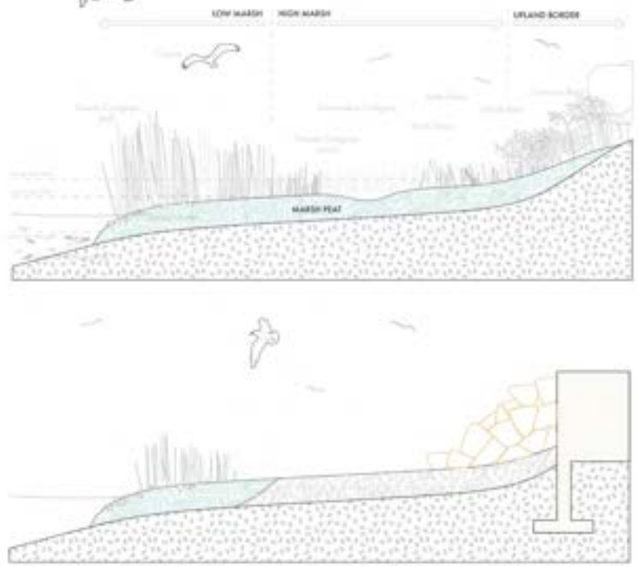
LOW MARSH

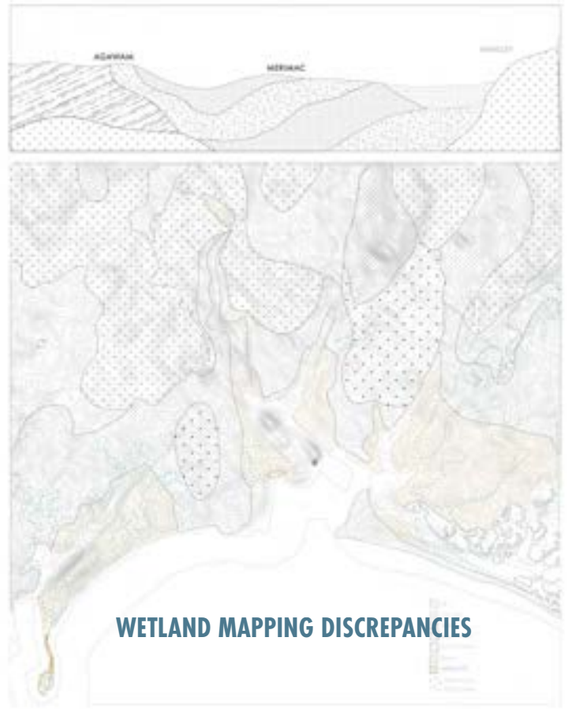
HIGH MARSH

UPLAND BORDER



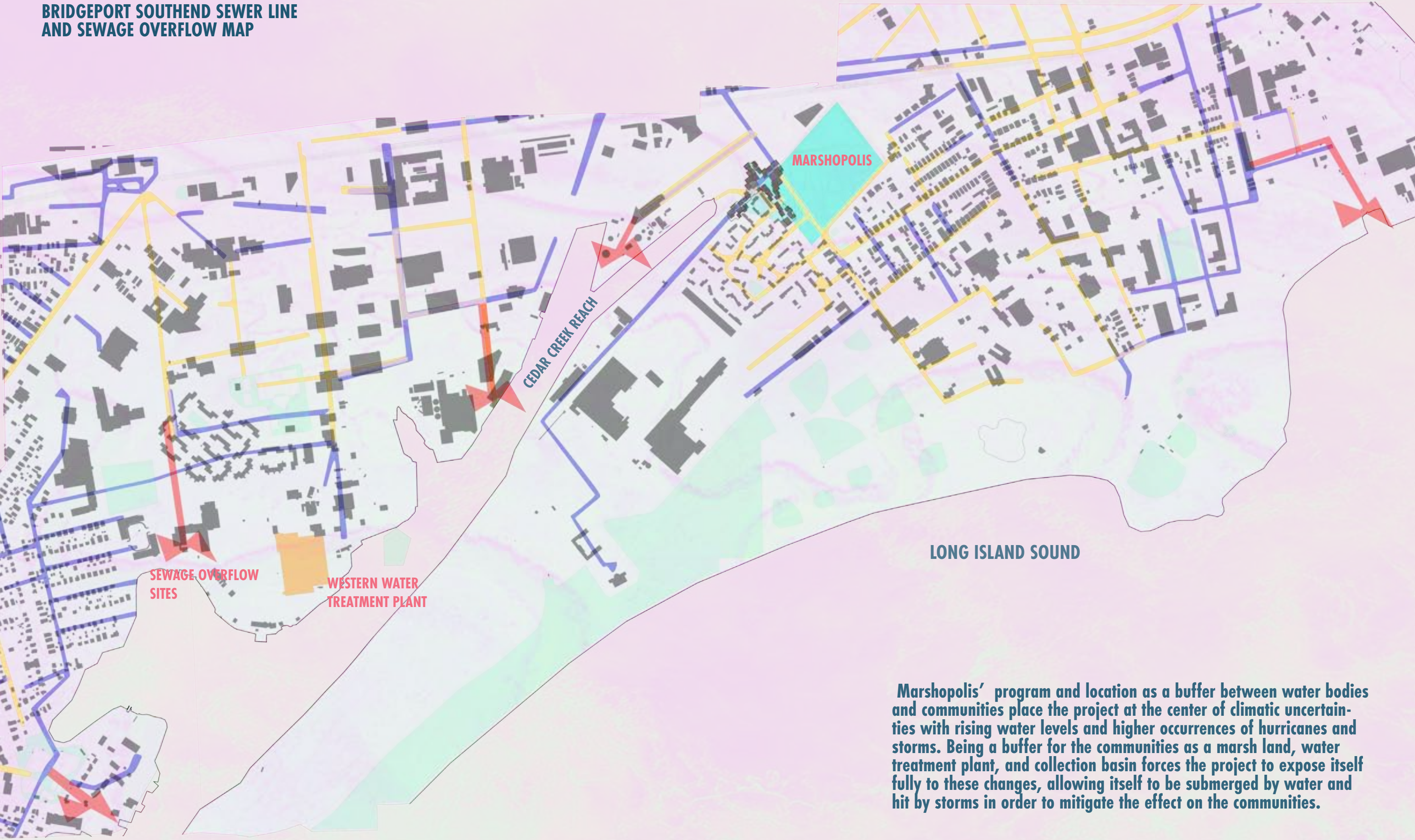
CONNETICUT SOIL MAP



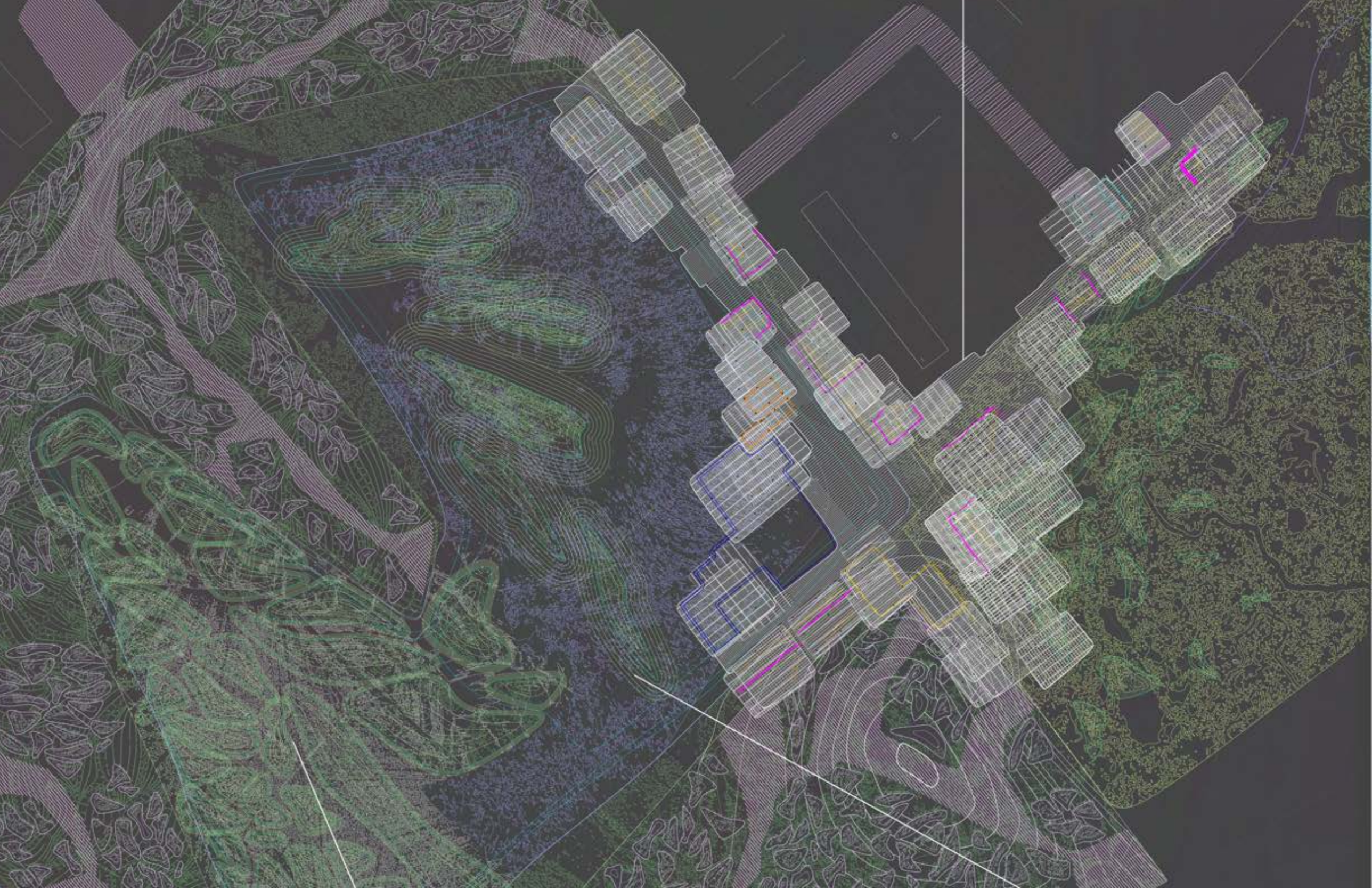


WETLAND MAPPING DISCREPANCIES

BRIDGEPORT SOUTHEND SEWER LINE AND SEWAGE OVERFLOW MAP

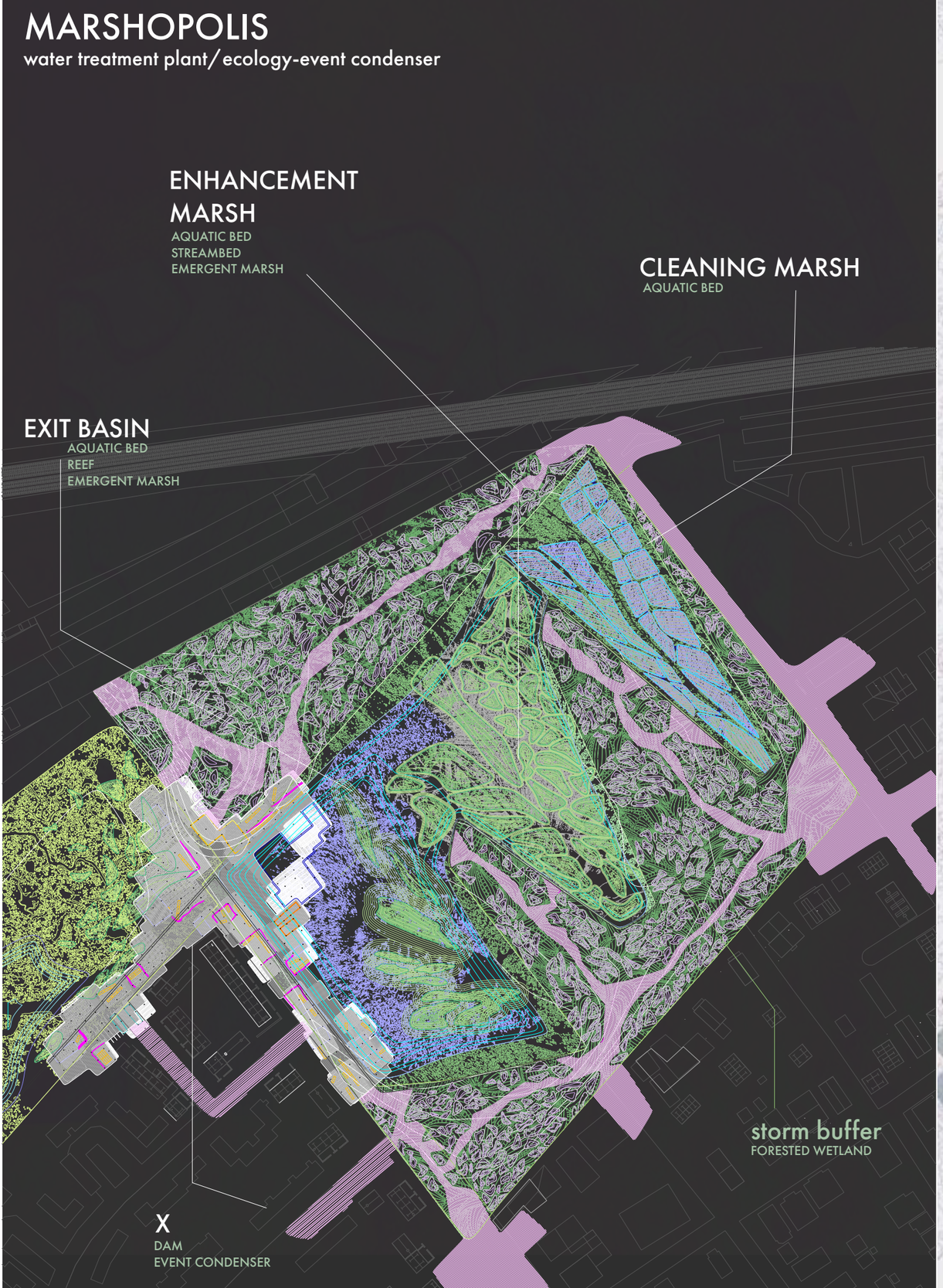


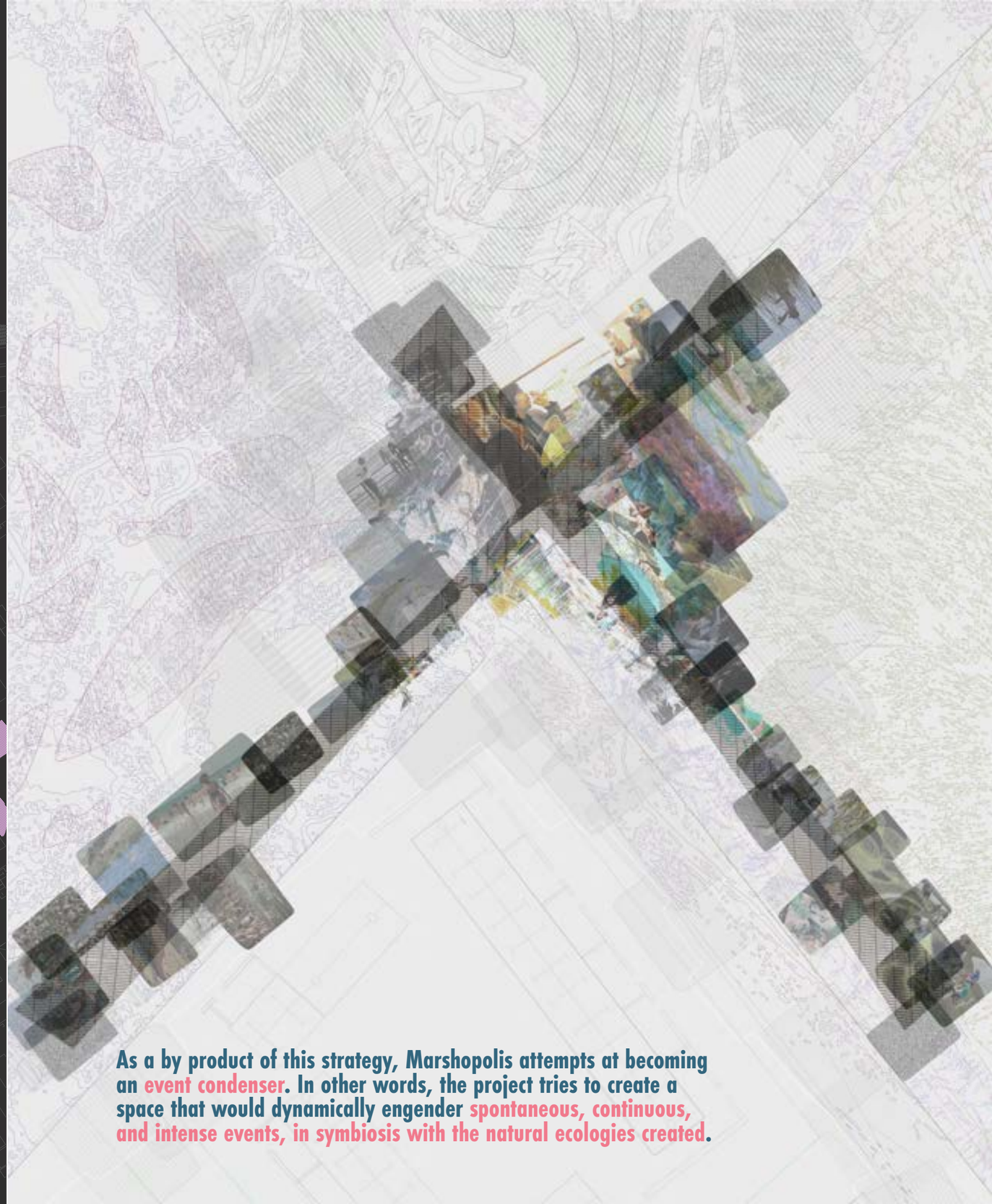
Marshopolis' program and location as a buffer between water bodies and communities place the project at the center of climatic uncertainties with rising water levels and higher occurrences of hurricanes and storms. Being a buffer for the communities as a marsh land, water treatment plant, and collection basin forces the project to expose itself fully to these changes, allowing itself to be submerged by water and hit by storms in order to mitigate the effect on the communities.



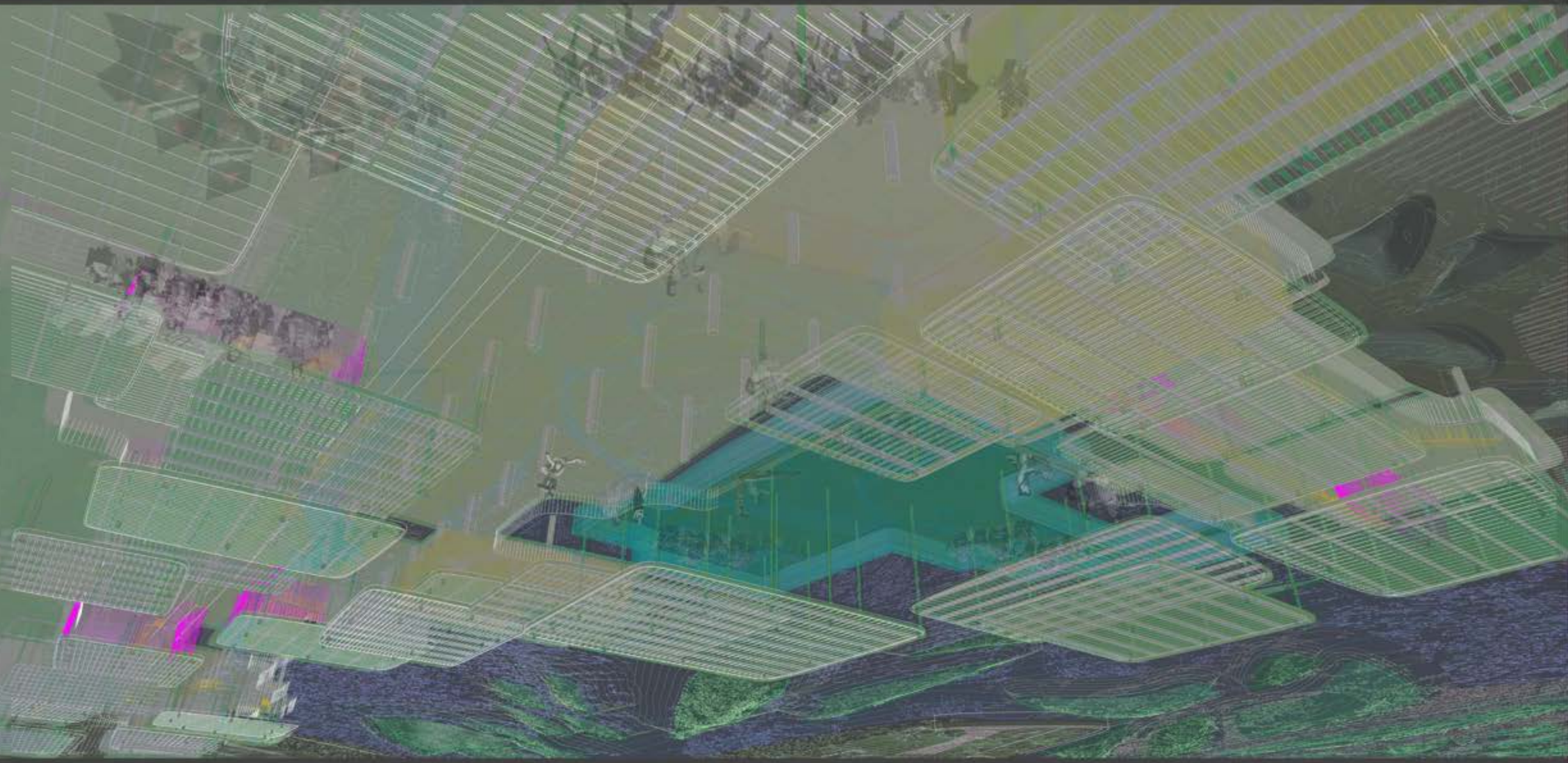
MARSHOPOLIS

water treatment plant/ecology-event condenser





As a by product of this strategy, Marshopolis attempts at becoming an event condenser. In other words, the project tries to create a space that would dynamically engender spontaneous, continuous, and intense events, in symbiosis with the natural ecologies created.



Fall 2023 | Adv V | GSAPP
INSTRUCTOR: LAURIE HAWKINSON

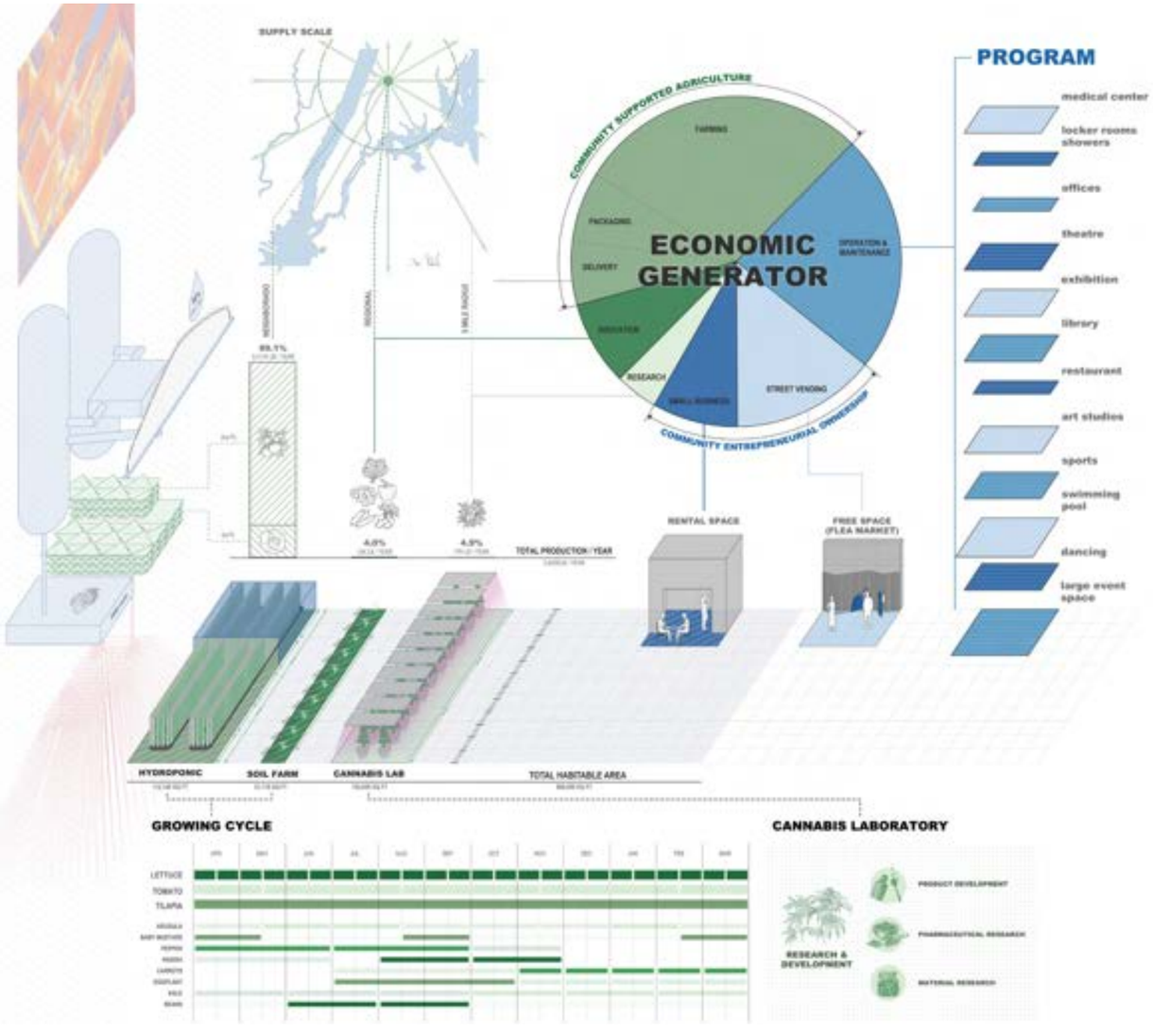
IN PARTNERSHIP WITH E.J. SHIN

THE (F)ARMORY

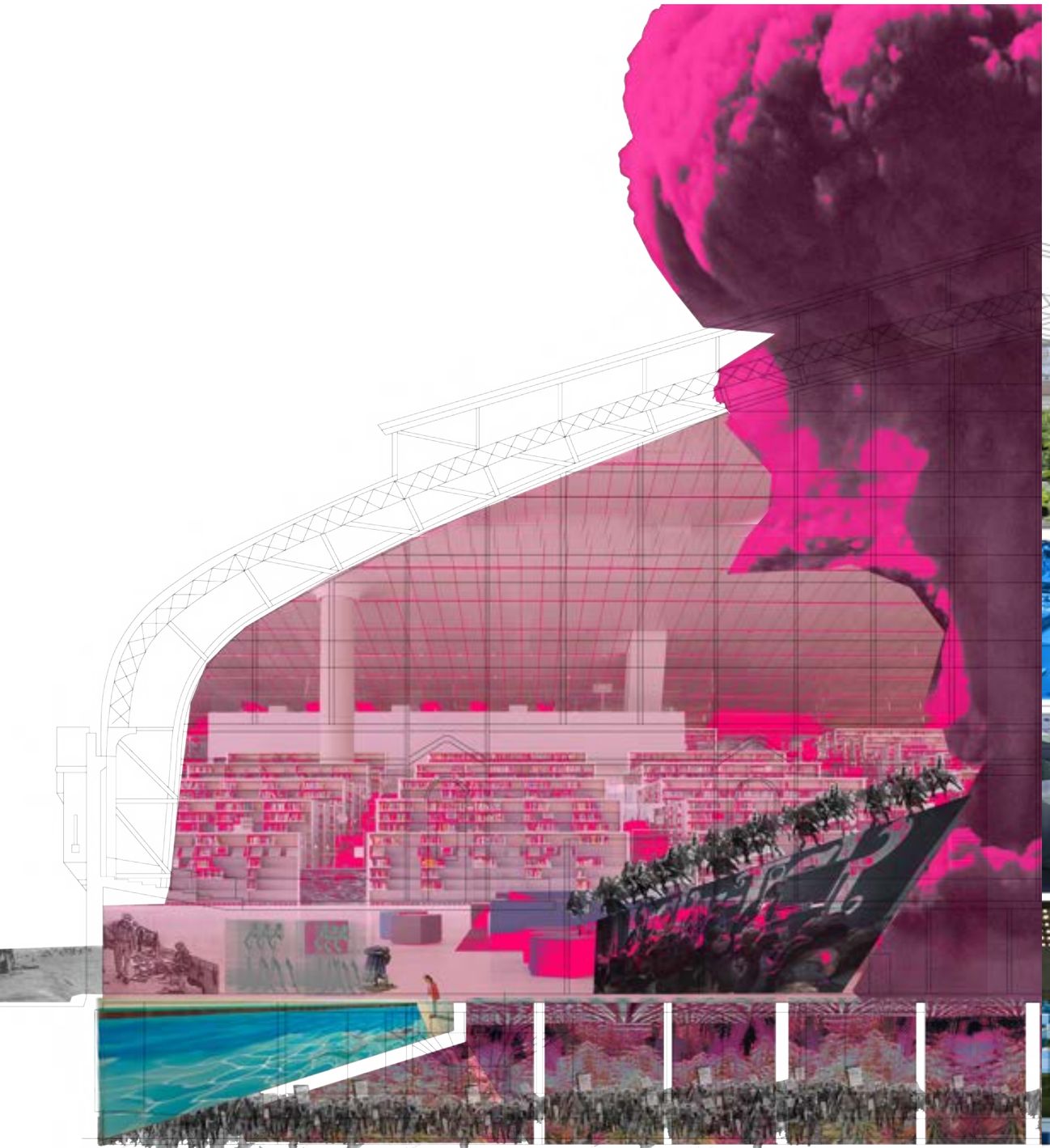
What if the armory was a farm? Our F-Armory proposal aims to feed the surrounding community with year-round fresh, locally and sustainably grown produce. Located in the neighborhood of Kingsbridge Heights in the northwestern Bronx, our project reinventsthe armory as the ground for the meeting of the urban farm and the “social condenser”, creating an economy, ecology, and event engine.
The farm’s goal is the creation of a circular, community-owned economy. Hydroponic towers distributed along elevated platforms in the drill-hall connect to an underground aquaponic system to support the growth of lettuce, tomatoes, and tilapia yearround. The distribution of tomatoes and lettuce to grocers and local businesses will constitute the main source of income forthe farm while seasonal soil green-houses on the top levels of the platform will help create a community supported agriculture program. In the basement levels, a Cannabis farm with material research labs will complement the F-Armory pro-gram above.

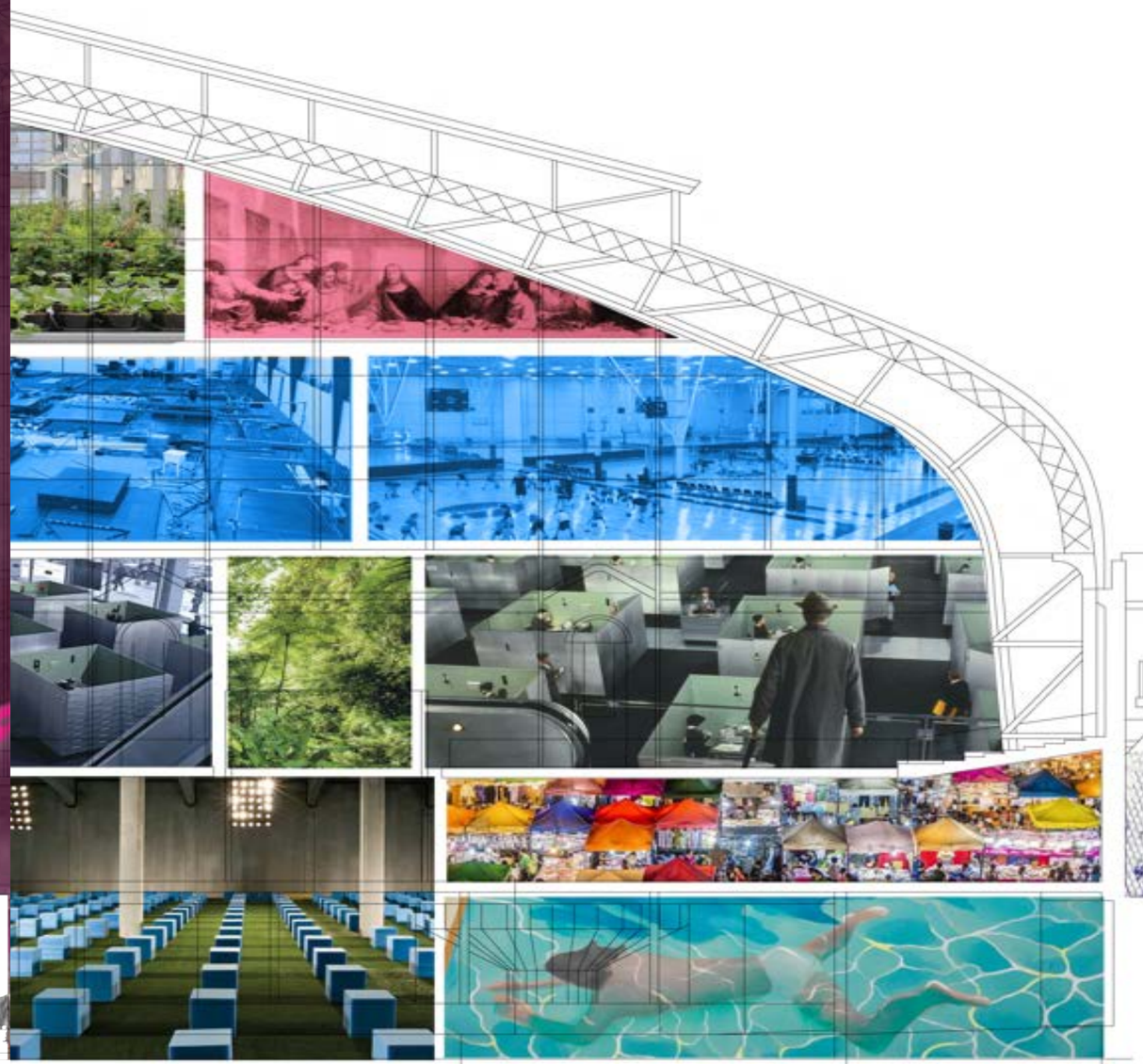
EXTREME: FARMING
LIMIT: SCALE, PROGRAM, PRODUCTION

THE URBAN FARM

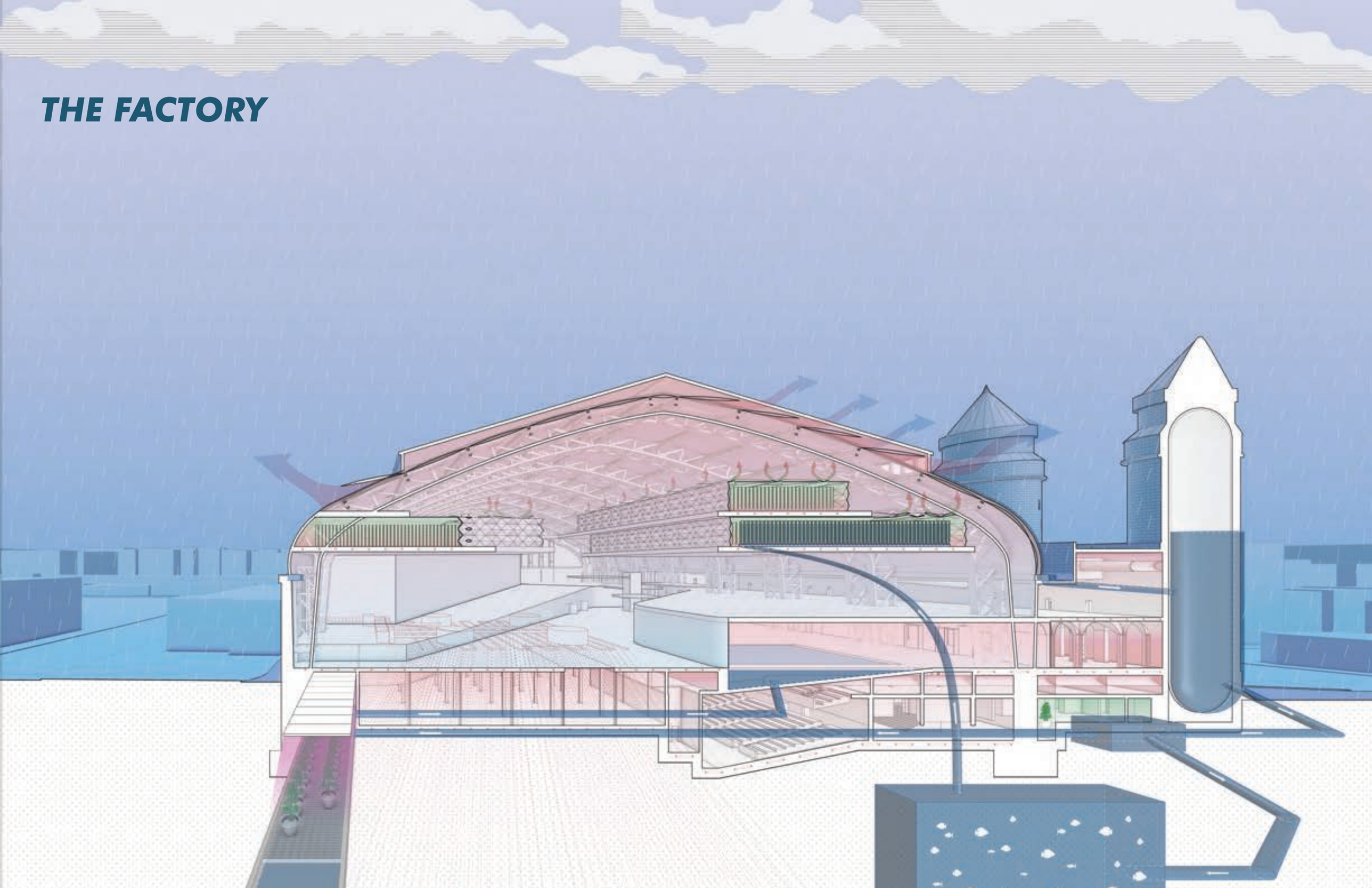


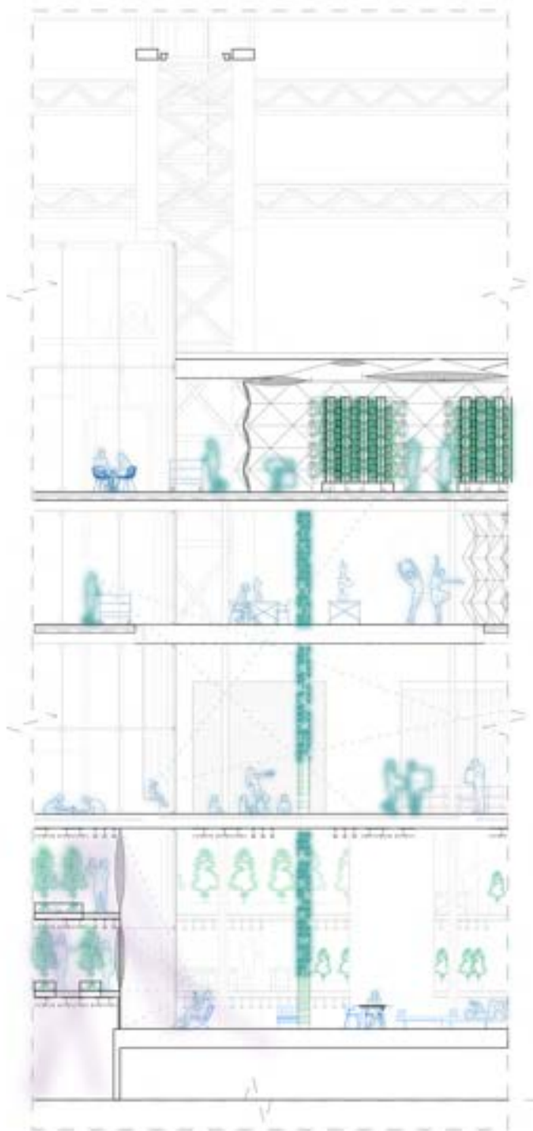
THE SOCIAL CONDENSER

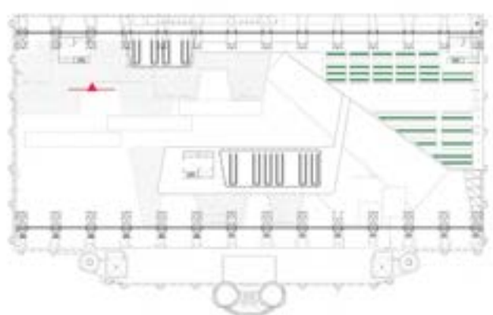


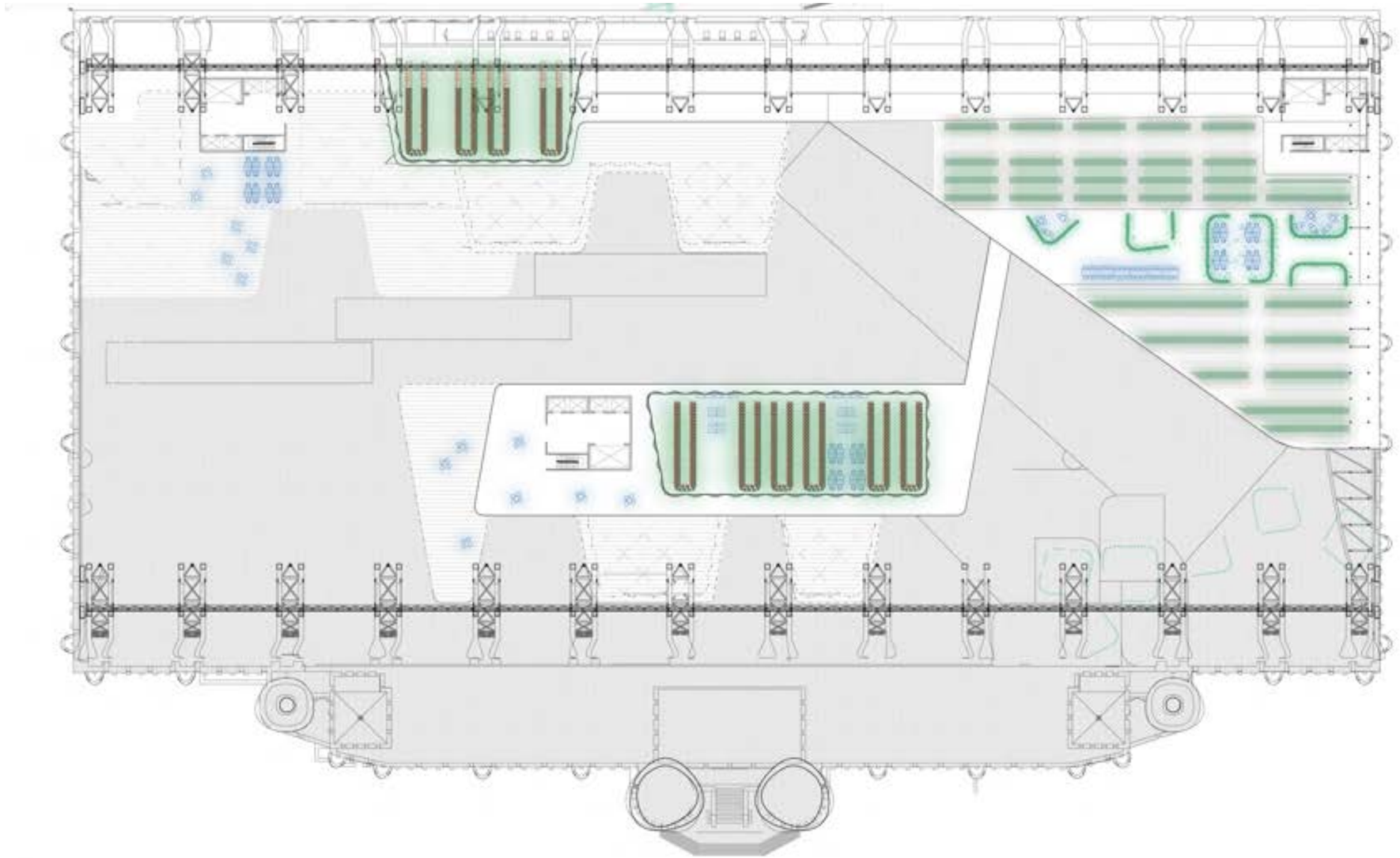


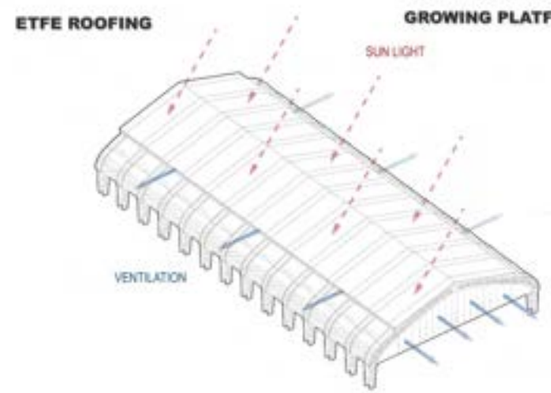
THE FACTORY

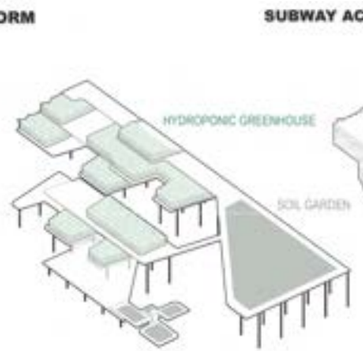


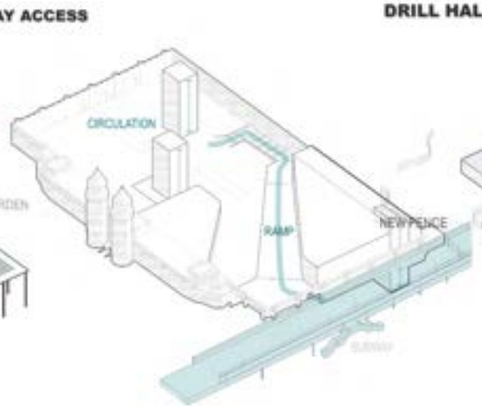


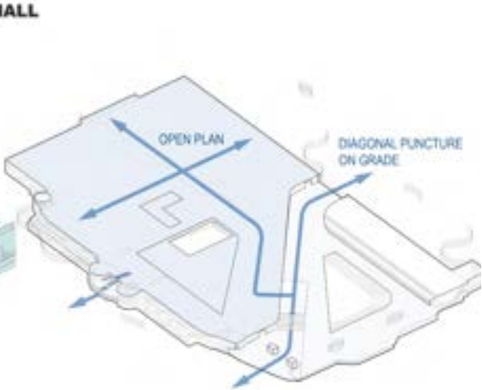


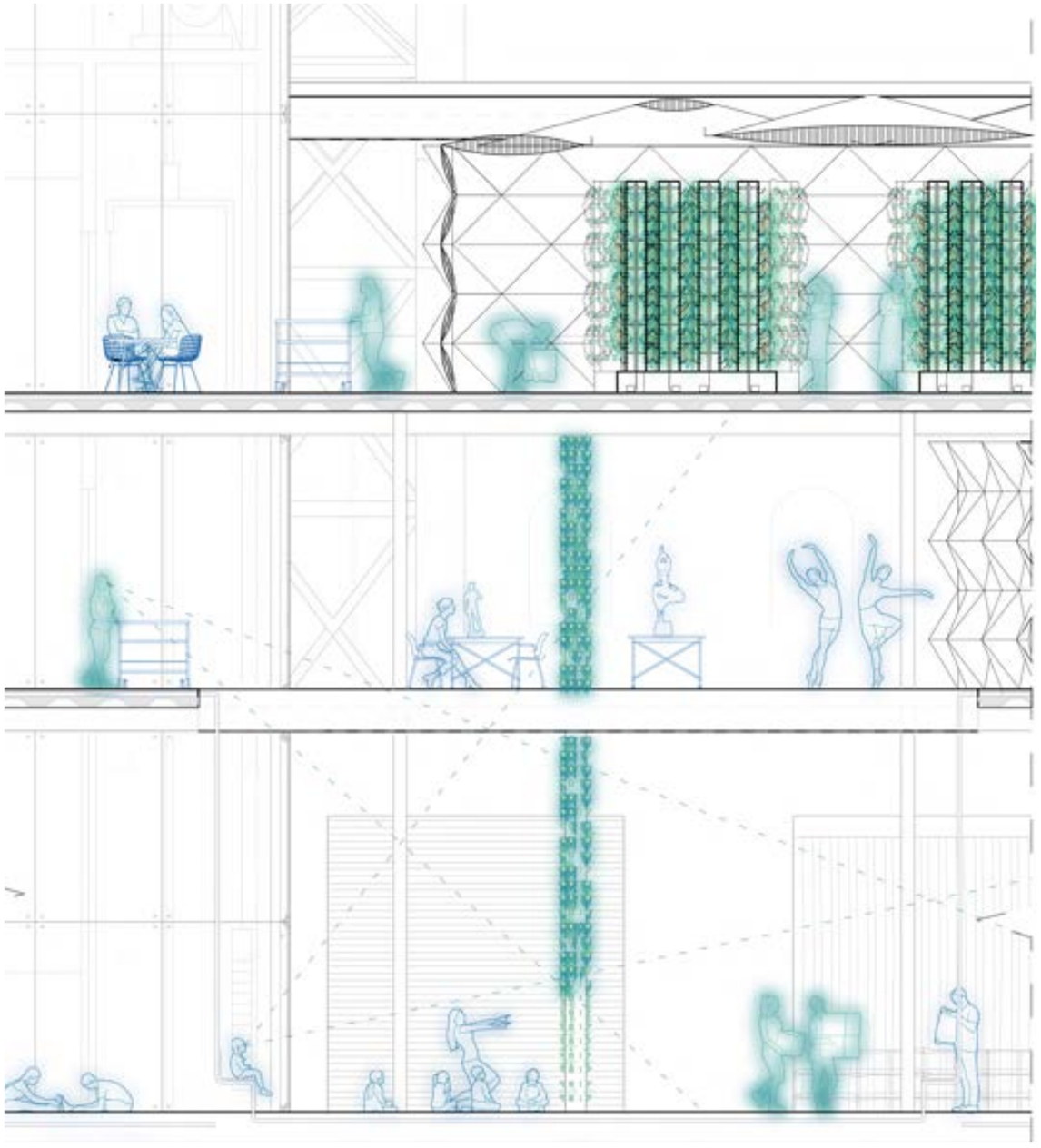


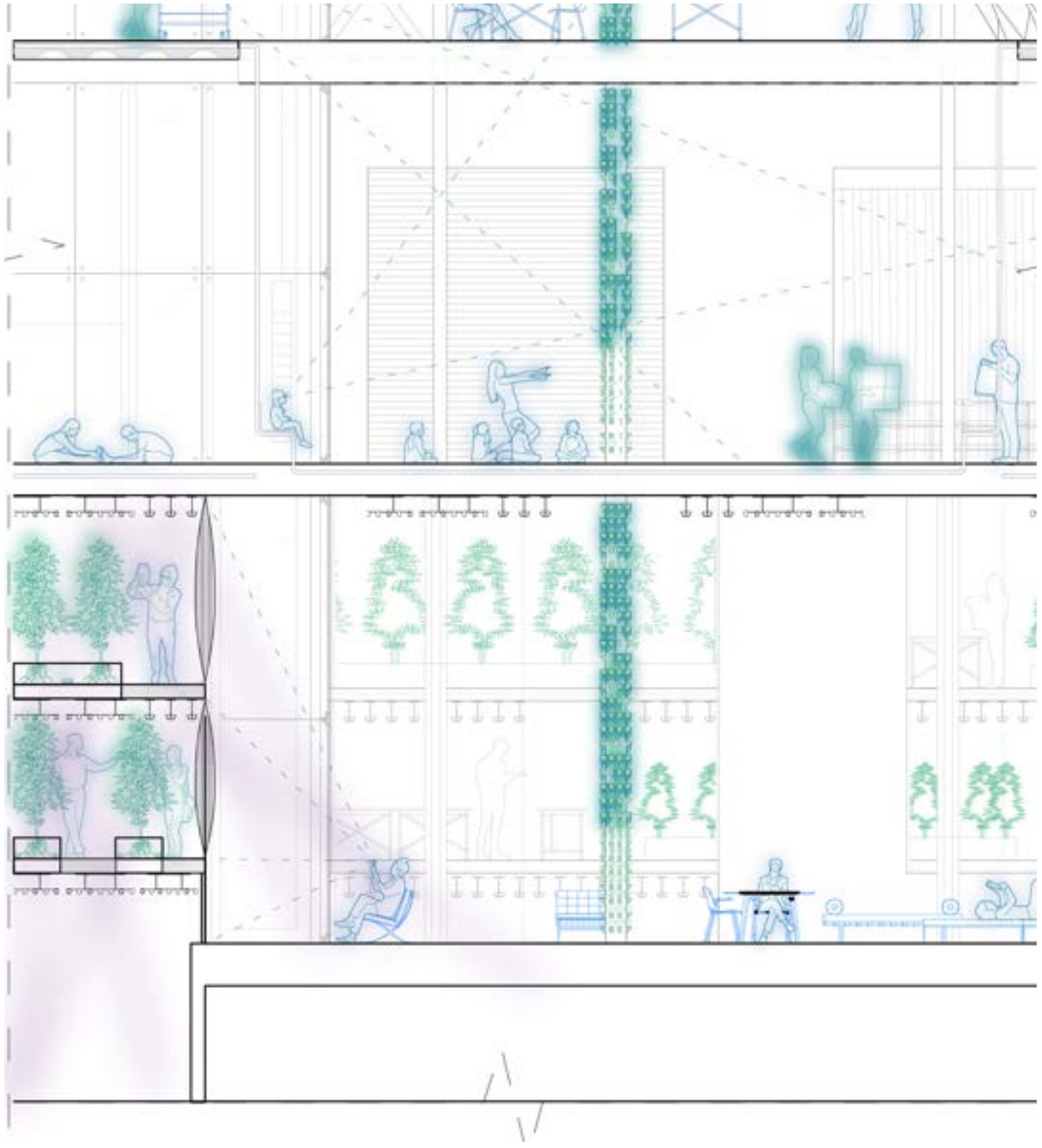

ETFE ROOFING
SUN LIGHT
VENTILATION


GROWING PLATFORM
HYDROPONIC GREENHOUSE
SOIL GARDEN


SUBWAY ACCESS
CIRCULATION
RAMP
NEW PENCE


DRILL HALL
OPEN PLAN
DIAGONAL PUNCTURE
ON GRADE





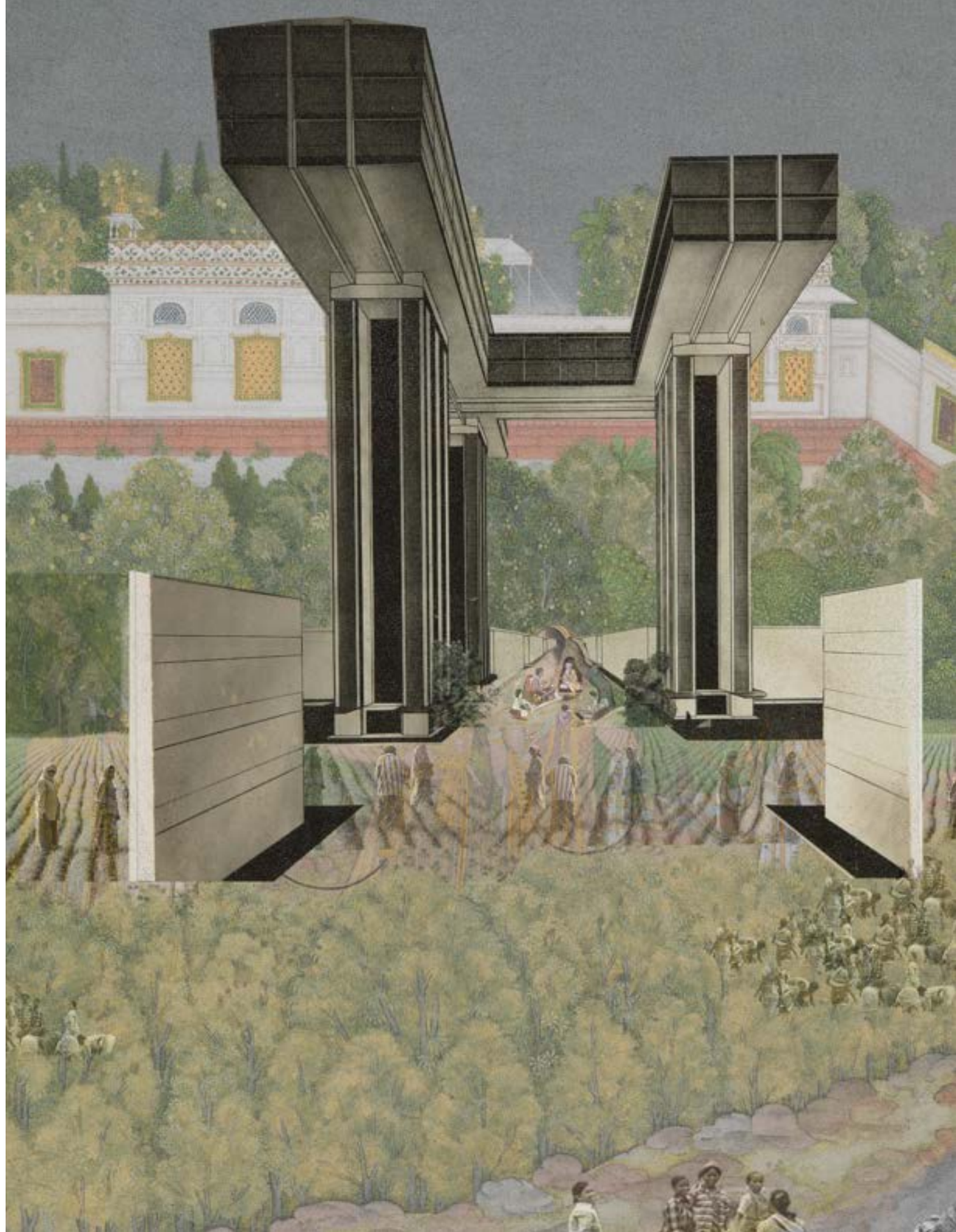
Spring 2024 | Adv VI | GSAPP
INSTRUCTOR SANDRO MARPILLERO & SONAL BERI

TOWN-PLANNING SUBVERSION SCHEME

Ahmedabad has been defined by an aggressive westward expansion into its peri-urban and rural vicinities, led by a decadal development plan devised by the city's planning authority AUDA.
The projects starts from the identification of discrepancies between planning scheme mappings and the physical reality of the village's plot boundaries, revealing a complex web of power relations, clashes, and even potential collaborations between institutions, communities, and individuals.
The claim is that at best, the disjunctions found within these planning schemes reveal a gross misunderstanding of the site's microtopography giving way to a violent reconfiguration of the agricultural plots with no regards to the embedded generational intelligence which has shaped the site's topography guided by the flow of water, and the growth of seeds.

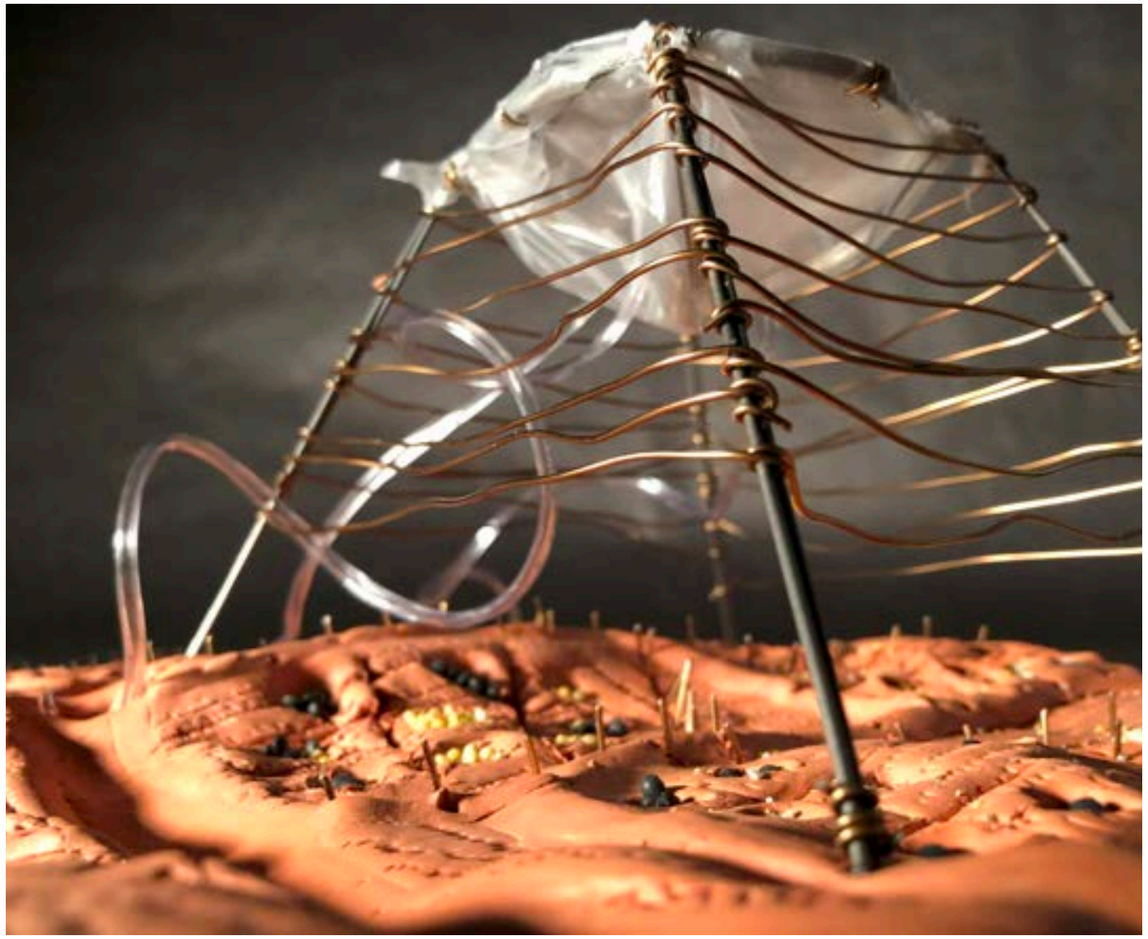
The project aims at devising a counter-town-planning scheme, which would welcome the inevitable westward AUDA advancement into Godhavi, by subverting it into conforming to the site's topographical watershed driven logic.

EXTREME: PLANNING
LIMIT: WATER-MANAGEMENT, HOUSING, PERI-URBAN

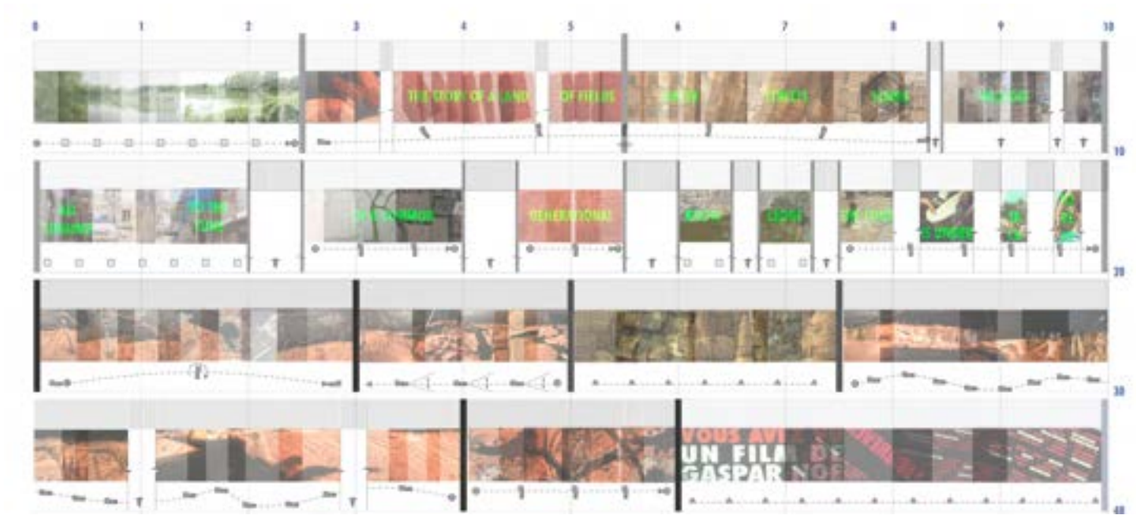


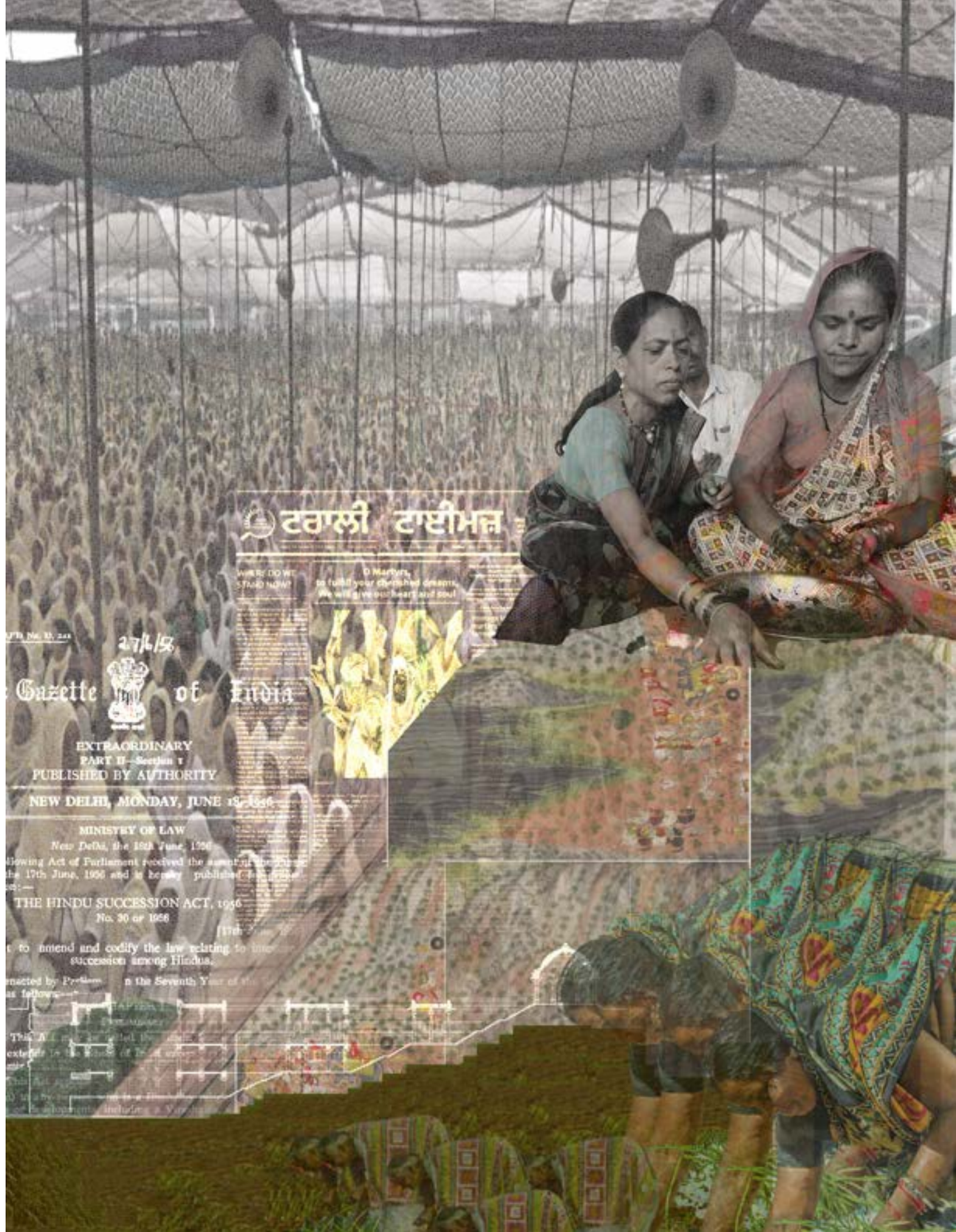
FIELD FORENSICS: UNCOVERING DISJUNCTIONS
BETWEEN TOWNPLANNING MAPPING AND REALITY ON SITE
THROUGH THE MAPPING OF FLORA AND AGRICULTURAL TRACES

tree
water - natural
water - canal
road - existing
road - planned
discrepancy area
(difference between reality
and AU/OA analysis)
buffer exception
(industrial building constructed
in protected buffer zone)
plot line - existing
plot line - planned
microtopography line

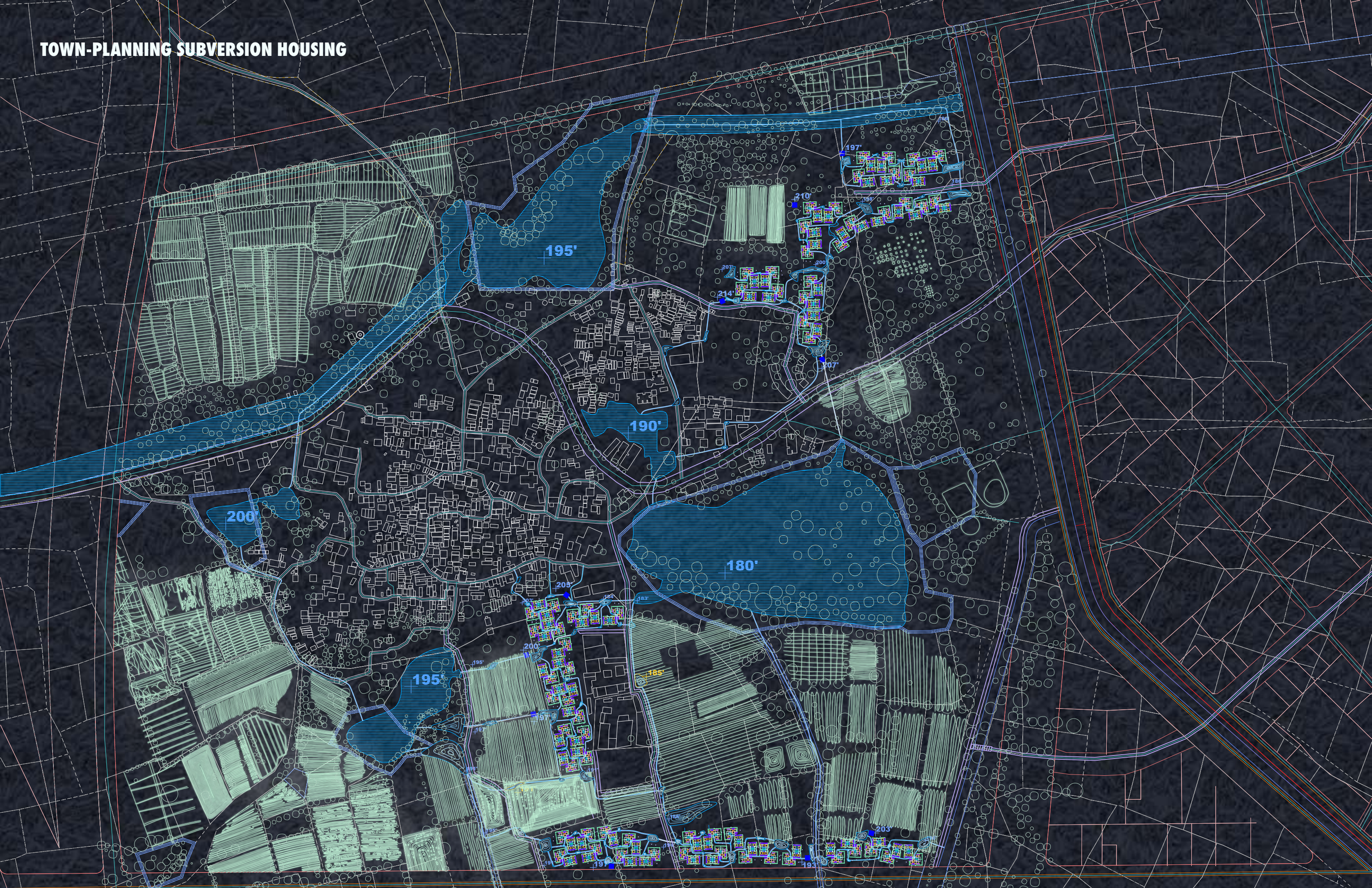


CONCEPTUAL MODEL AND SHORT FILM: GENERATIONAL KNOWLEDGE X TOWN-PLANNING

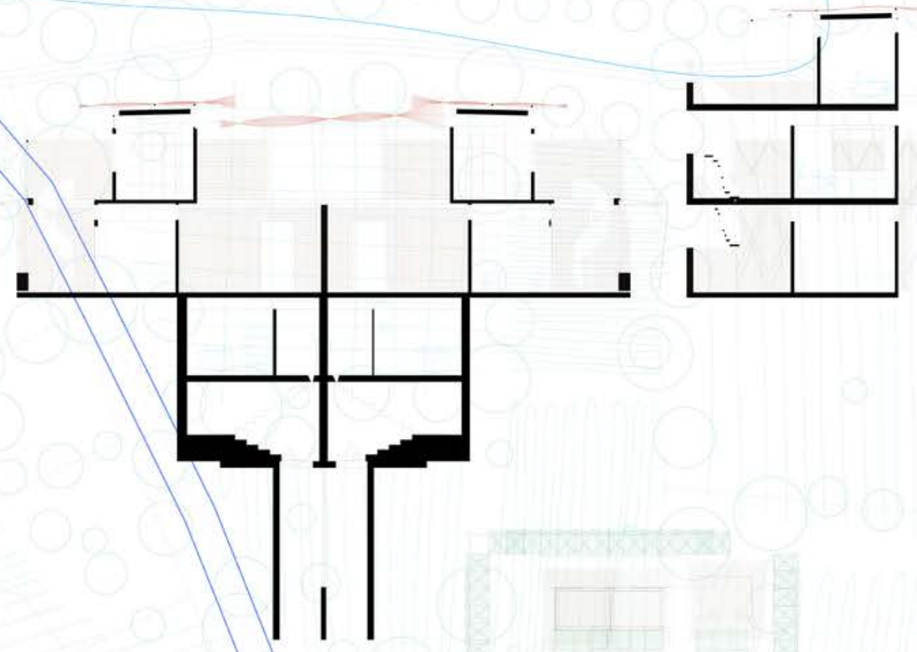




TOWN-PLANNING SUBVERSION HOUSING

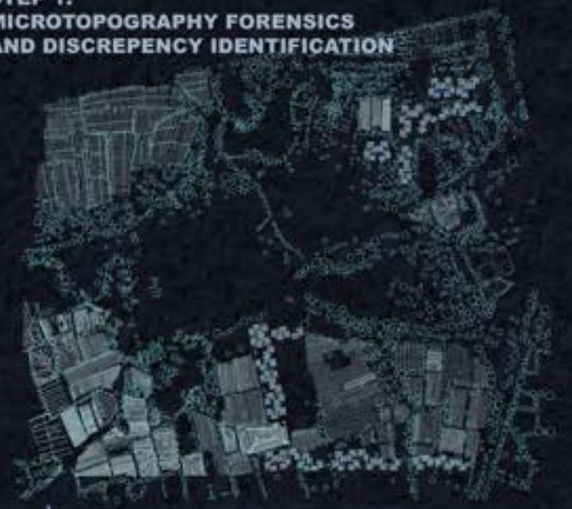


TPSS HOUSING: HOUSING FOR CONSTRUCTION WORKERS, STUDENTS, VILLAGERS, AND AQUIFERS



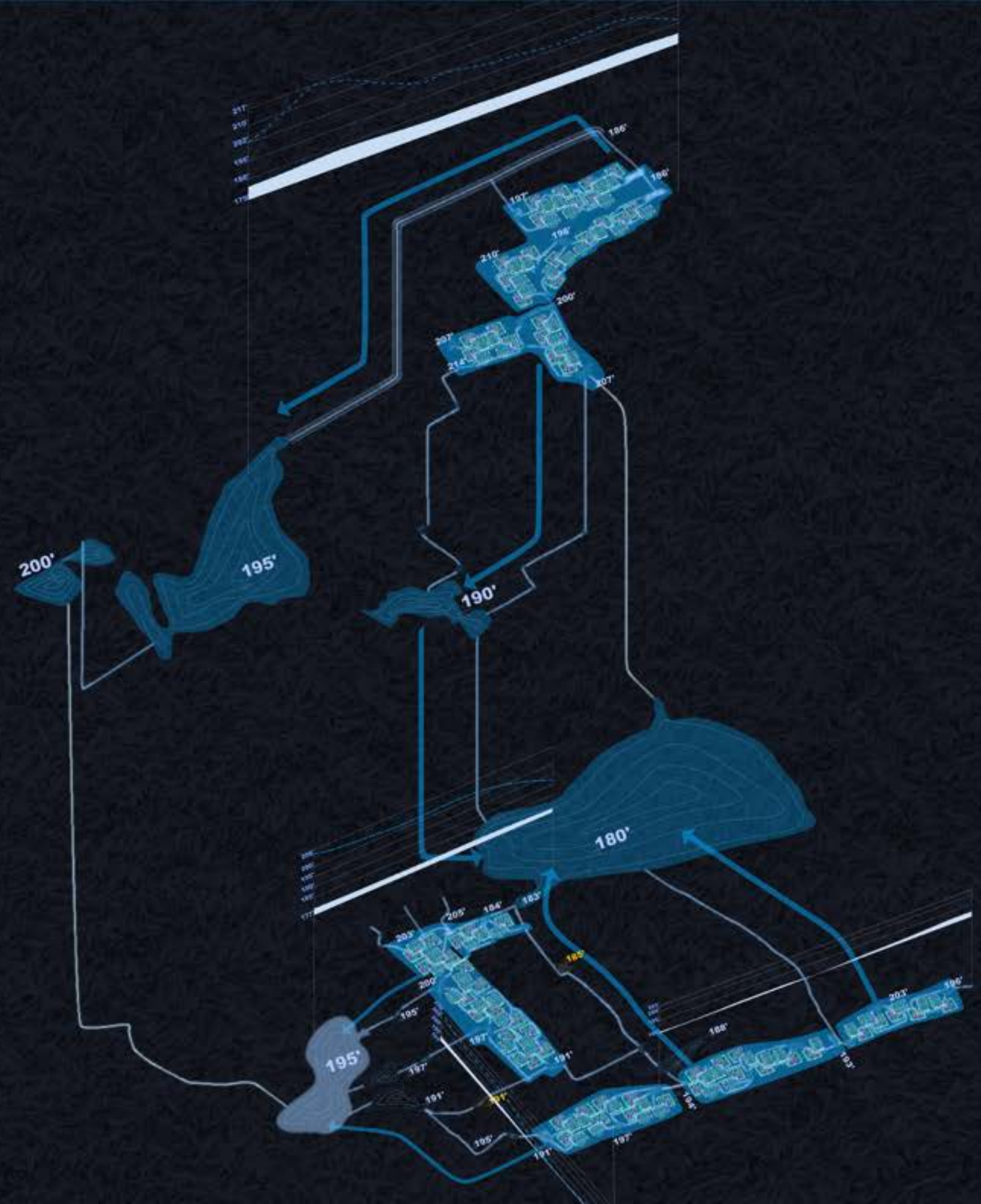
TOWN PLANNING SUBVERSION SCHEME

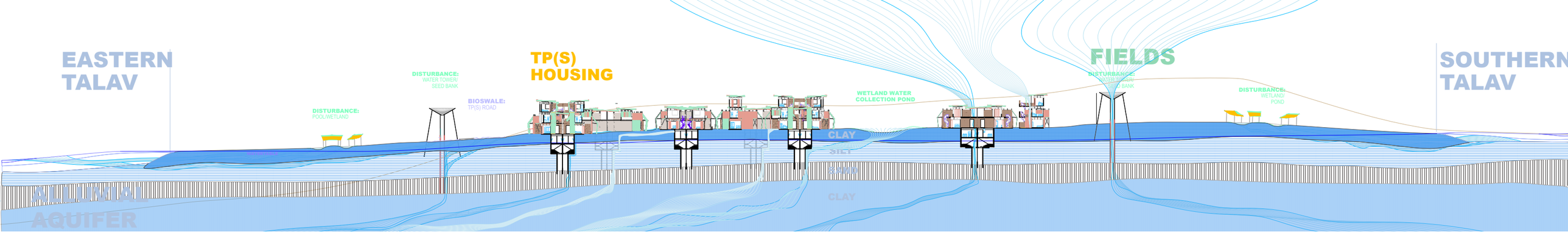
STEP 1:
MICROTOPOGRAPHY FORENSICS AND DISCREPENCY IDENTIFICATION

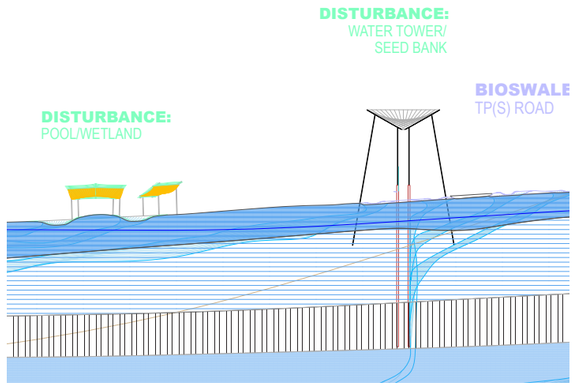


STEP 2: TP ANTICIPATION (ROADS, PIPES, HOUSES)

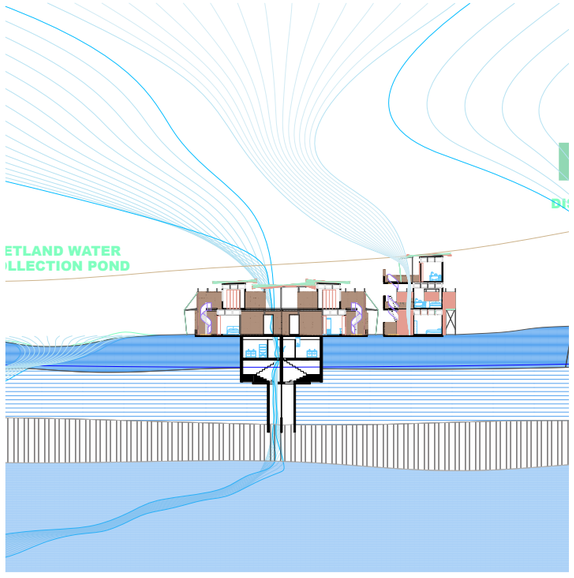
STEP 3: PROPAGATION THROUGH WATERSHED

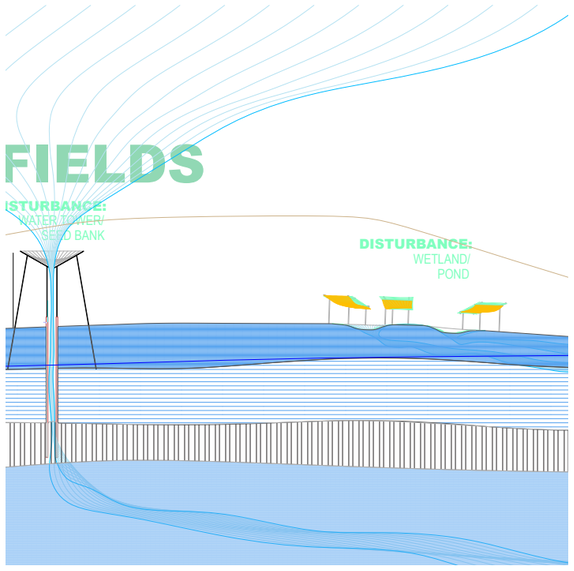


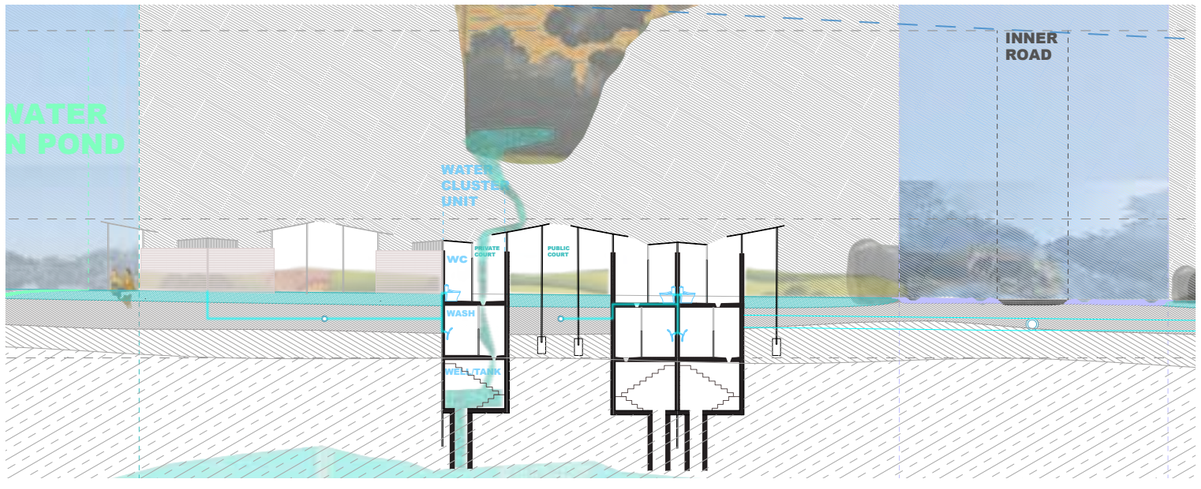

EASTERN TALAV
DISTURBANCE: POOL/WETLAND
DISTURBANCE: WATER TOWER/ SEED BANK
BIOSWALE: TP(S) ROAD
TP(S) HOUSING
WETLAND WATER COLLECTION POND
CLAY
SILT
SAND
CLAY
FIELDS
DISTURBANCE: WATER TOWER/ SEED BANK
DISTURBANCE: WETLAND/ POND
SOUTHERN TALAV
ALLUVIAL AQUIFER

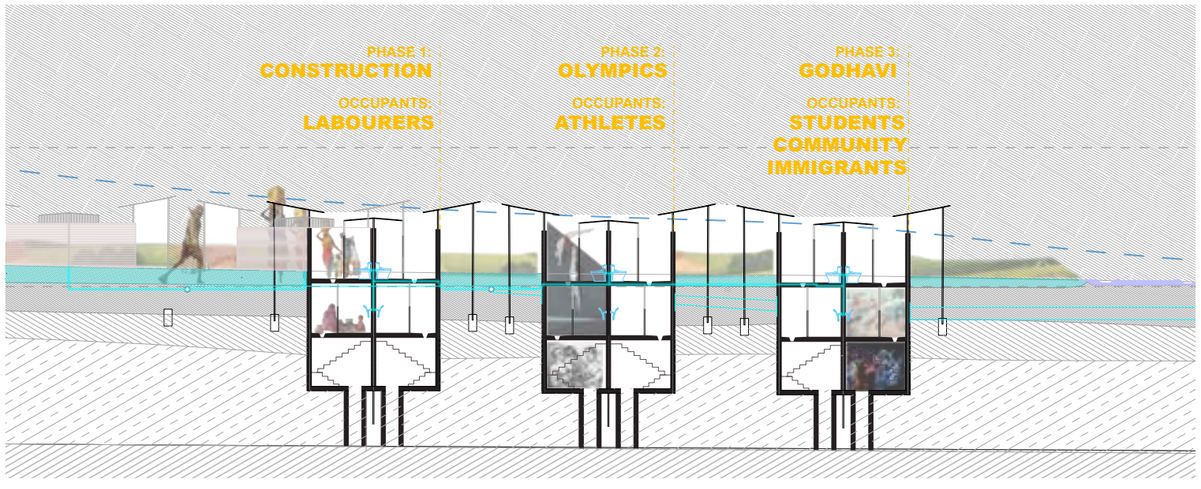
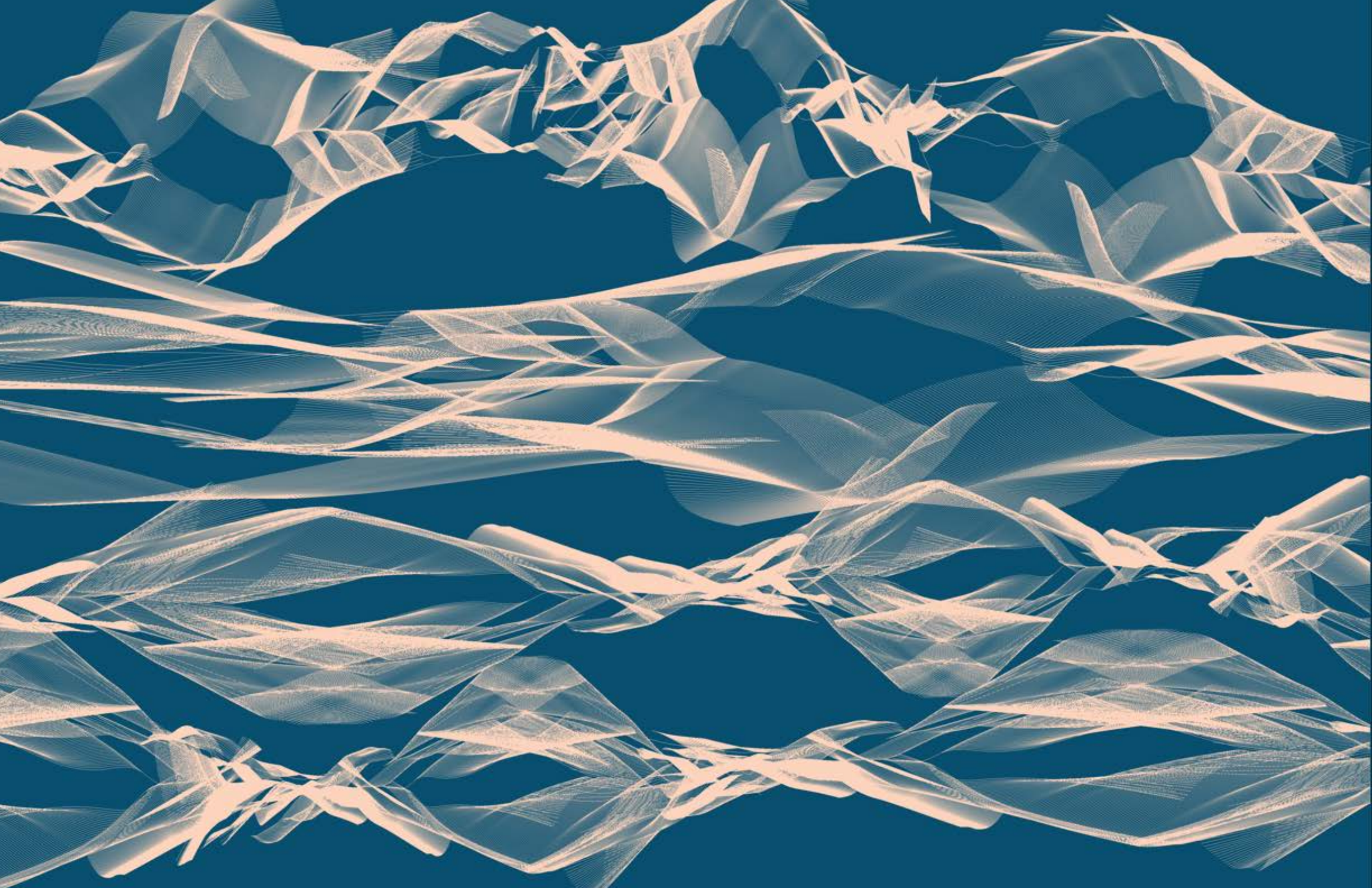

DISTURBANCE: WATER TOWER/ SEED BANK
BIOSWALE TP(S) ROAD
DISTURBANCE: POOL/WETLAND

NG


ETLAND WATER
LLECTION POND


FIELDS
DISTURBANCE: WATER TOWER/ SEED BANK
DISTURBANCE: WETLAND/ POND


WATER
N POND
INNER ROAD
WATER CLUSTER UNIT
WC
PRIVATE COURT
PUBLIC COURT
WASH
WELL/TANK


PHASE 1:
CONSTRUCTION
OCCUPANTS:
LABOURERS
PHASE 2:
OLYMPICS
OCCUPANTS:
ATHLETES
PHASE 3:
GODHAVI
OCCUPANTS:
STUDENTS
COMMUNITY
IMMIGRANTS