



RAFAEL DO PRADO

Architecture & Design Portfolio
M.Sc 2017-18 | Professional Work 18 - | B.arch 2016 -17

PROJECTS

A ● ATLANTIC AVE

Mixed-Use Residential project under construction in Brooklyn, NY.

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B ● THE REFINERY

Iconic Commercial restoration project in Domino Park, formerly Domino Sugar Factory.

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C ● RIVER RING

Transformative neighborhood project with Mixed-use Residential towers.

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Re-imagining the port of Valencia, Spain and creating a new public space. 1st place winner: Straddle3 studio.

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04 ● Urban Alchemy

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05 ● ReHook

Proposal for Red Hook in Brooklyn, NY. 2nd Place competition winner.

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06 ● Red Hook Library

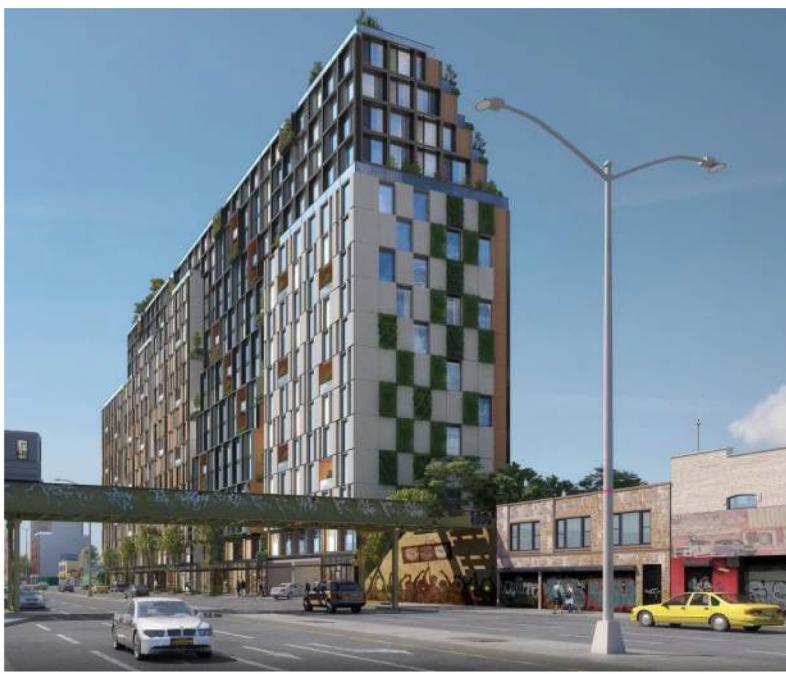
Library and community center for the neighborhood of Red Hook, Brooklyn.

[p.24-25]

● Professional Practice: **Dencityworks** [Brooklyn] || **Straddle3** [Barcelona]

● Master of International Cooperation:
Sustainable Emergency Architecture [M.Sc] **Universitat Internacional de Catalunya**

● Bachelor of Architecture [B.Arch] **New York Institute of Technology**



INFO

PROJECT: 1057 ATLANTIC AVE

LOCATION: BROOKLYN, NY

ZONING: C6-3a

LOT AREA: 46,752 SF

BUILDING AREA: 508,632 SF

PROJECT PHASES: SD THROUGH CONSTRUCTION

STATUS: CONSTRUCTION

HIGHLIGHTS

124 affordable units. NYC's 7th largest project in 2021. Over 30,000 SF in Retail.

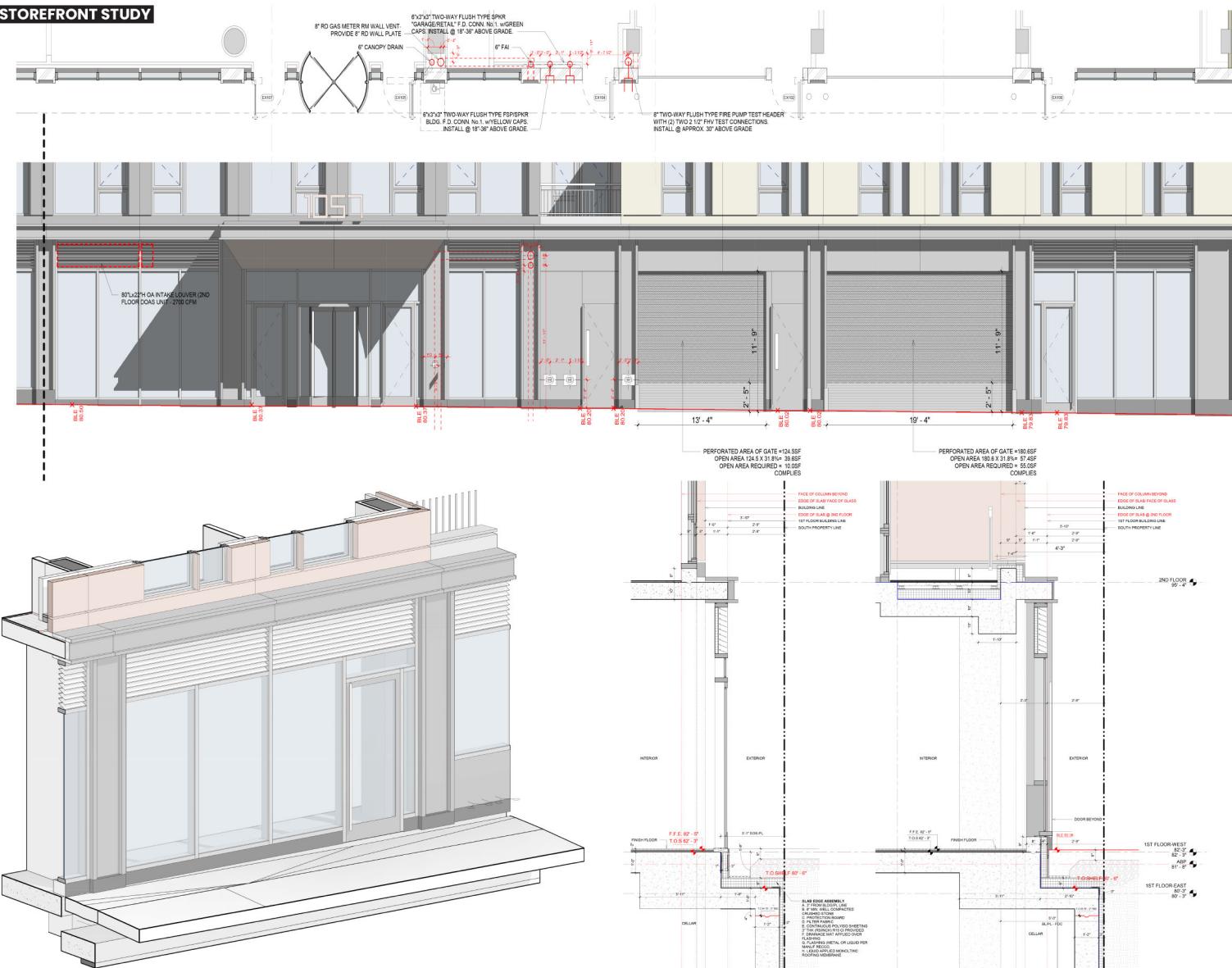
PROGRAMS USED: REVIT, SKETCHUP, BLUEBEAM, ENSCAPE

ROLE

PROJECT ARCHITECT: SD-DD

PROJECT MANAGER: CD-CA

STOREFRONT STUDY



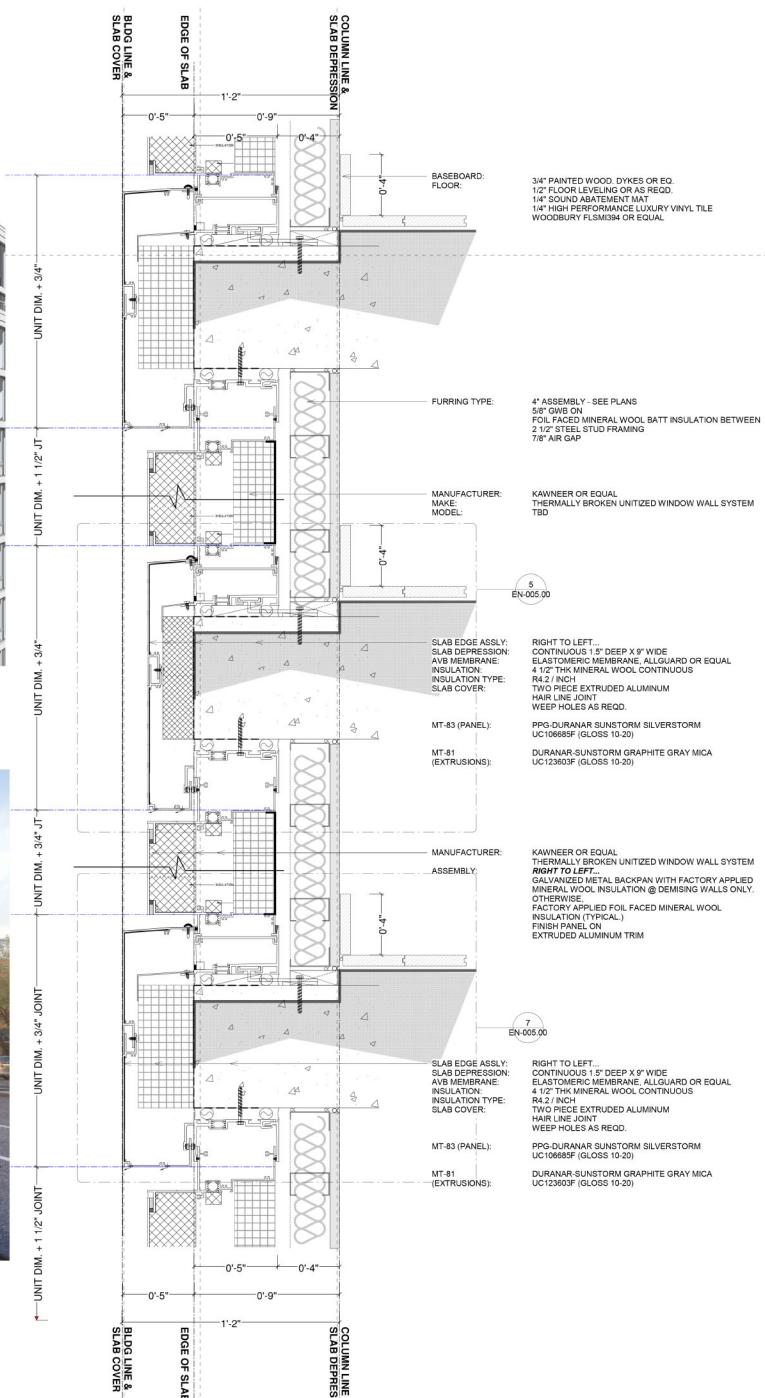
MIXED USE

PROFESSIONAL WORK

N/E BUILDING CORNER



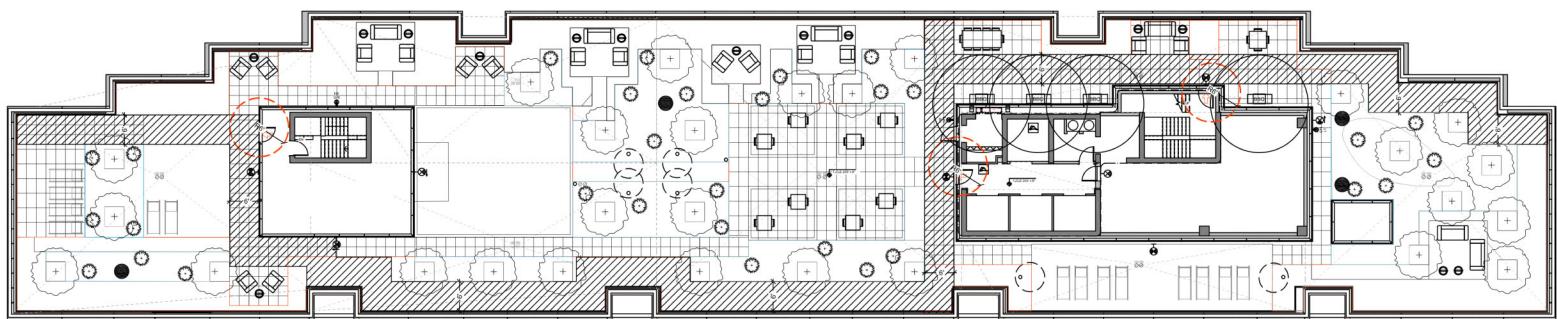
WINDOW WALL DETAIL

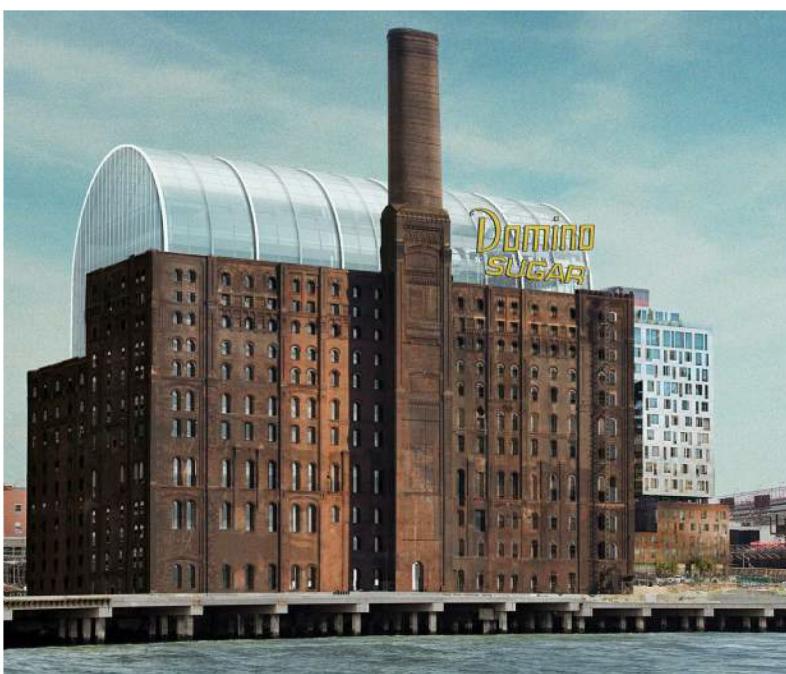


ATLANTIC AVE RETAIL



MAIN ROOF PLAN





INFO

PROJECT: DOMINO REFINERY

LOCATION: BROOKLYN, NY

ZONING: C6-2

LOT AREA: 68,106 SF

BUILDING AREA: -

PROJECT PHASES: CD THROUGH CONSTRUCTION

STATUS: INTERIOR FITOUT ONGOING

HIGHLIGHTS

Extensive restoration and retrofit. Steel structure building with vaulted glass roof.

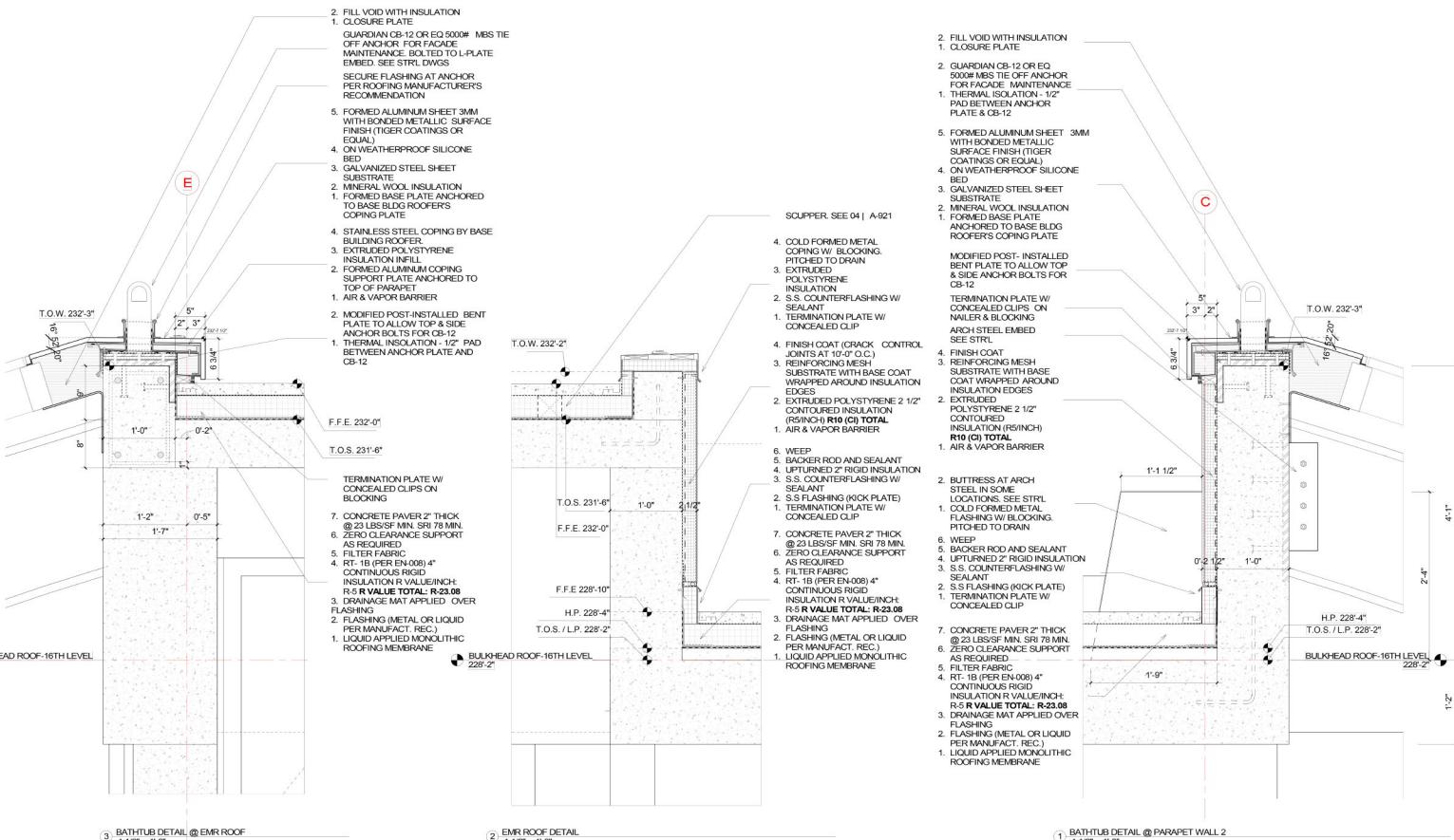
PROGRAMS USED: REVIT, BLUEBEAM

ROLE

PROJECT ARCHITECT: CD THROUGH CONSTRUCTION

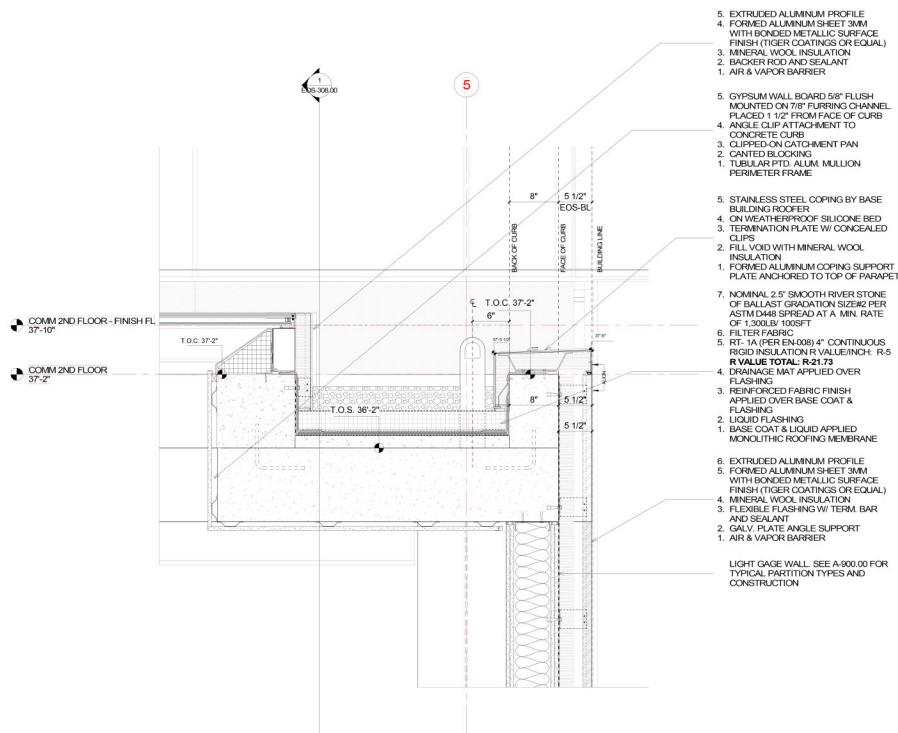
WATERPROOFING DETAILS

Created an entire suite of waterproofing details and sections at all entrances and terrace conditions, relaying information on building sequence.

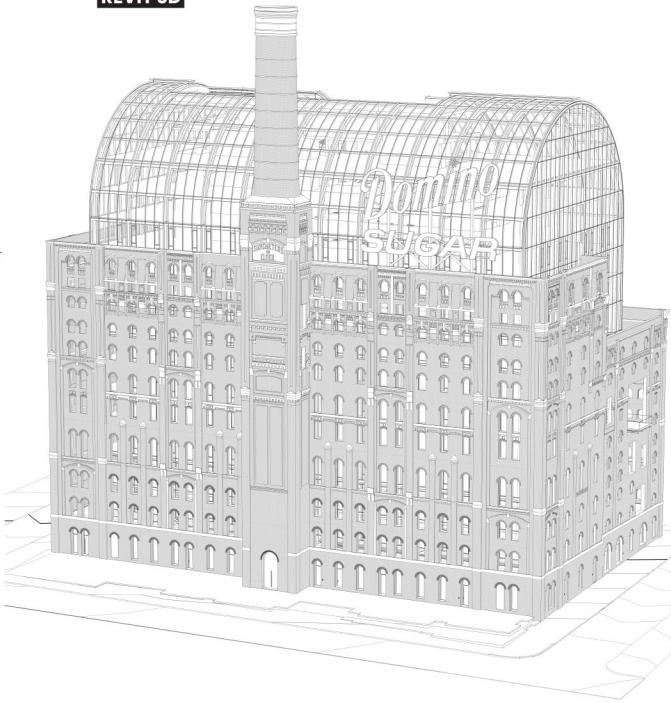


COMMERCIAL

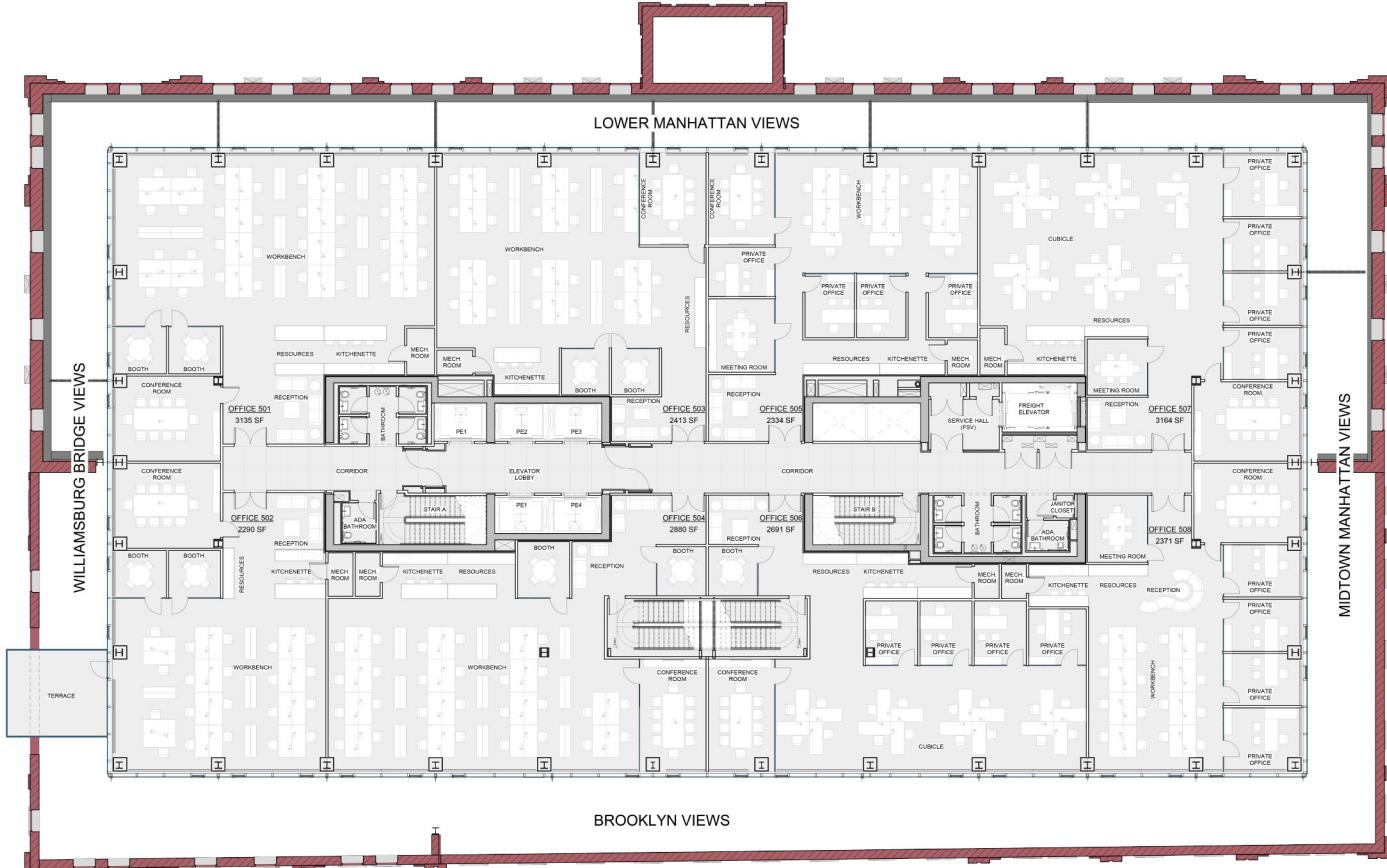
PROFESSIONAL WORK



REVIT 3D



MARKETING PLAN





INFO

PROJECT: RIVER RING
LOCATION: BROOKLYN, NY
ZONING: C6-2 (R8 EQ)
LOT AREA: 61,771 SF
BUILDING AREA: 444,575 SF
PROJECT PHASES: SD, D.O.B SET
STATUS: -

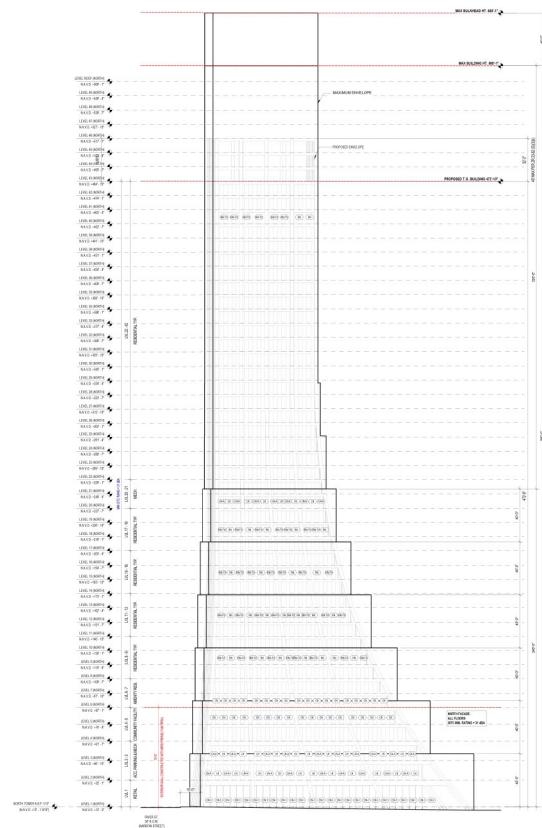
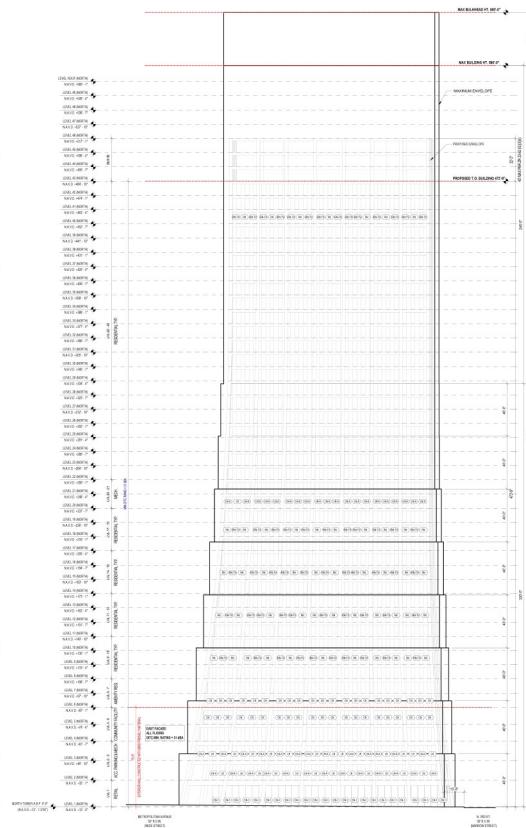
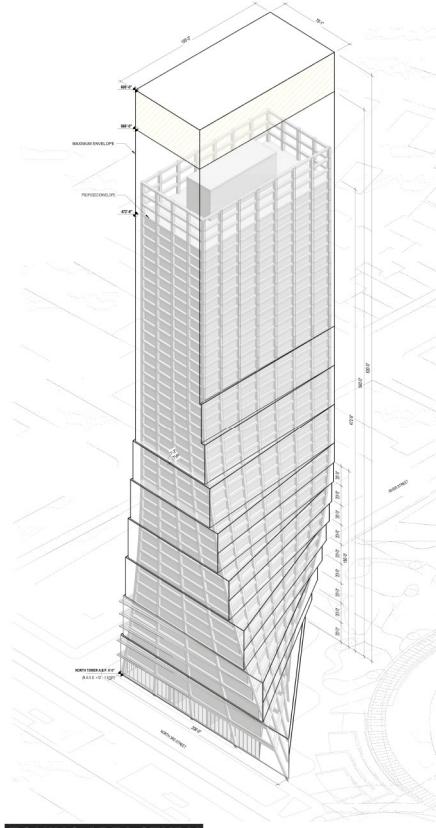
HIGHLIGHTS

Transformative neighborhood project with Mixed-use Residential towers.

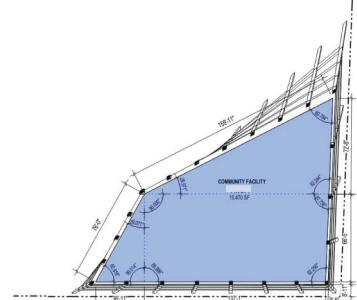
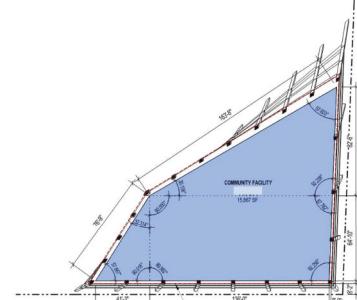
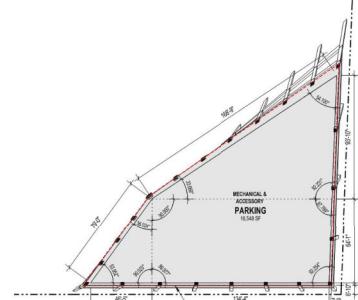
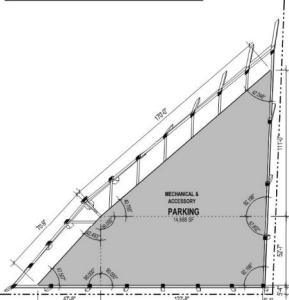
PROGRAMS USED: REVIT, BLUEBEAM

ROLE

PROJECT ARCHITECT: SD THROUGH DOB APPROVAL

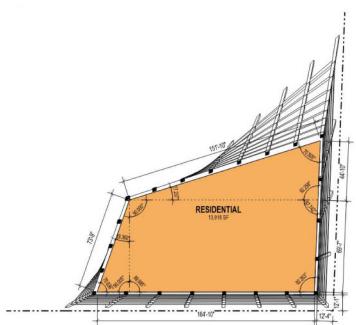
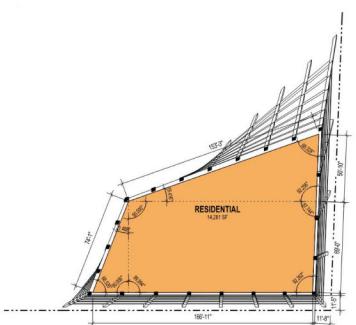
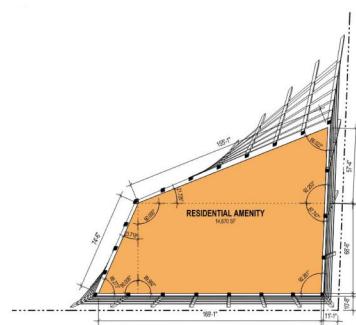
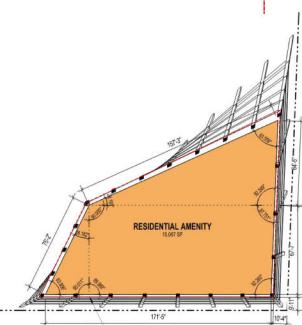
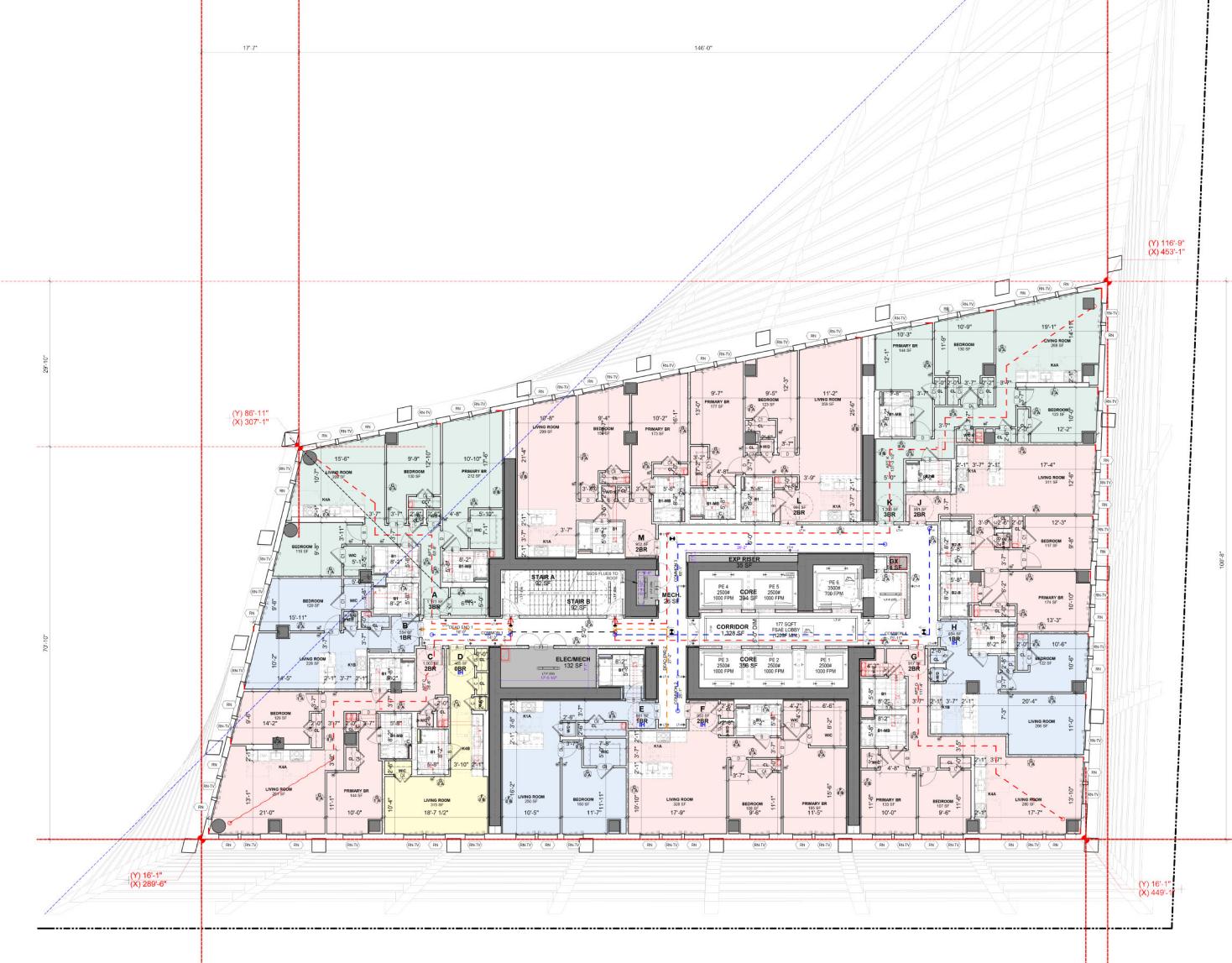


ZONING AREA STUDY



TYPICAL PLAN

Plan view where zoning, life safety, layout, and area analysis were incorporated into one single drawing in order to expedite approval.



MARJAL URBANA

Re-imagining the port of Valencia, Spain and creating a new public space. 1st place winner. Straddle3 studio.

3 strategies



RENATURALIZATION

The two areas of the plaza are permeated by a series of green pockets that give a unique character to both, articulating them with the rest of green pockets of La Marina and generating a naturalized environment.



WALK, PEDAL, BE

A public space with priority for the pedestrian and bicycle paths that connects the different routes for cyclists around the zone.



RINGS AND USES

A flexible place open to all kinds of uses although focused on skateboarding. As a strategy of coexistence a series of "rings" of intensity ranging from skateboarding to facades of the buildings and that insinuate

"Marjal Urbana" intends to recover this natural relationship with the sea through a flexible and permeable space, and for this purpose, proposes to carry out certain actions in the place.

Value of the natural elements.

It is proposed to adapt the space to the plant specimens that the square is currently hosting, expanding the tree stands and the landscaped surfaces. In the same way, actions are also proposed to facilitate access to the sea. The Plaça de l'Ona "renaturalized" is a piece that completes the system of greens that

punctually dot the harbor.

Integration of the skatepark.

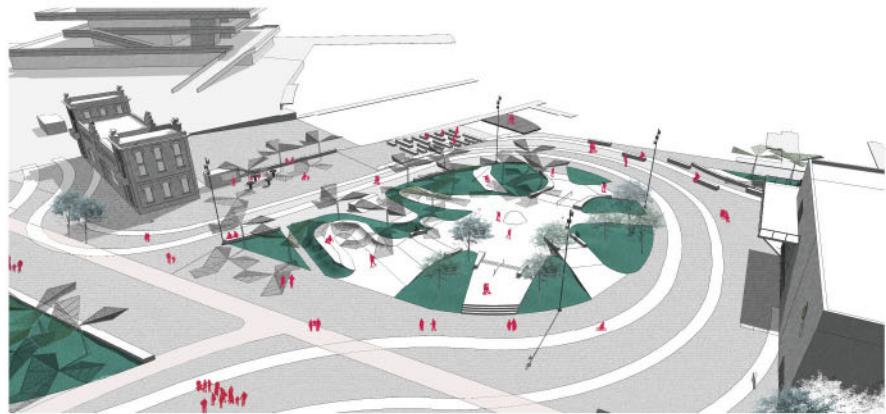
Artificial topography. The design of the skatepark aims to solve its integration with the environment and with the floor plan through the generation of an artificial topography that accommodates different uses.

Generation of shadow.

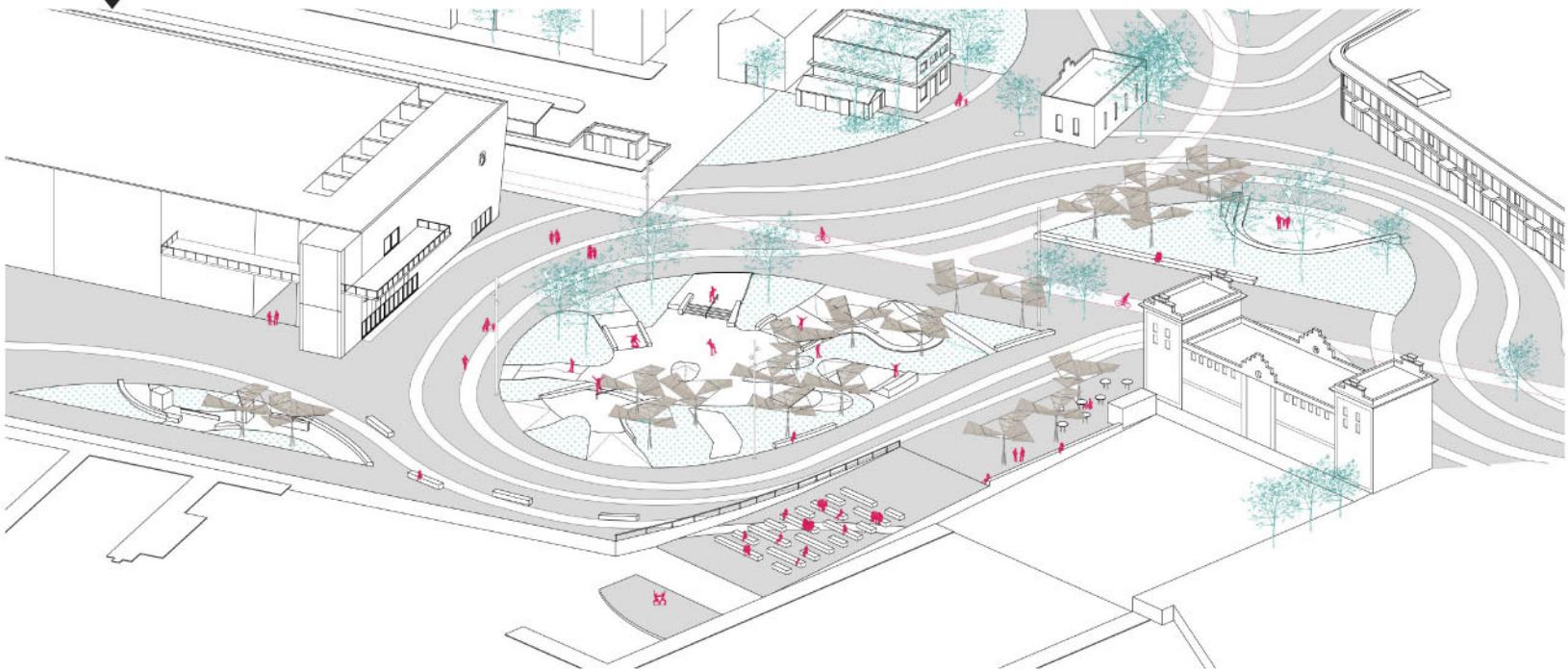
Installation of small modular pergolas that provide shade throughout the project and that are able to carry vegetation.

Unification of space and pavement treatment.

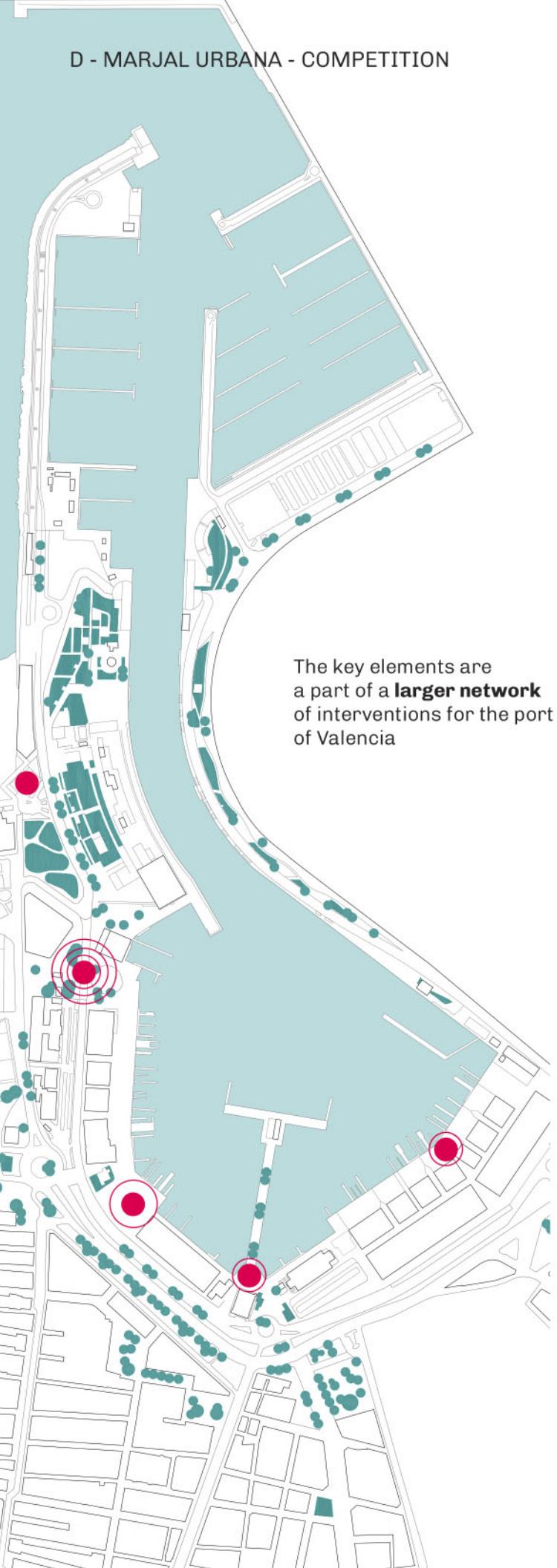
A single floor plan capable of solving access and circulation



Key Elements



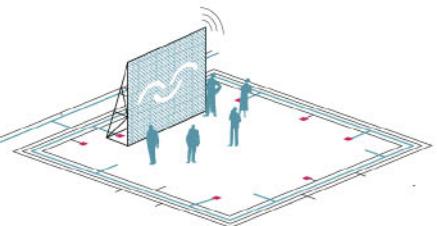
D - MARJAL URBANA - COMPETITION



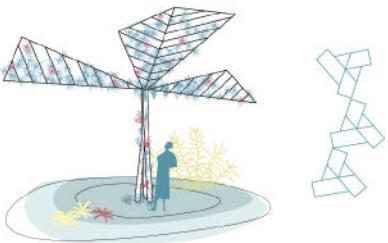
The key elements are a part of a **larger network** of interventions for the port of Valencia



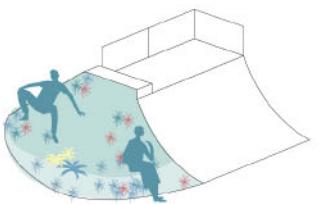
GROUND PATTERNS _ WAVES



INSTALLATION SPACE



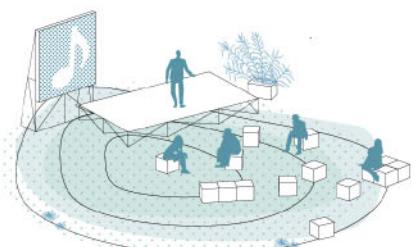
SHADING ELEMENTS



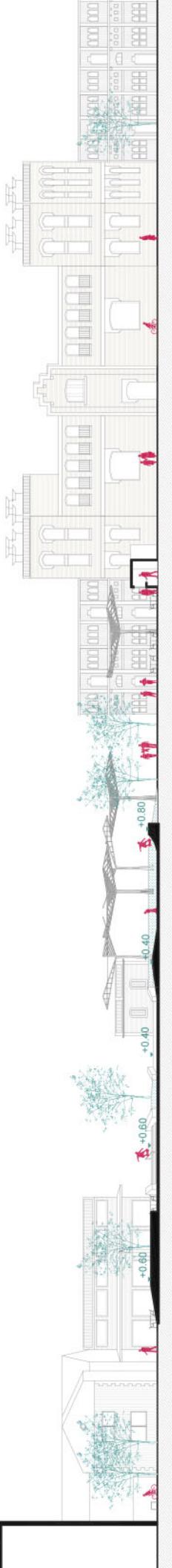
ARTIFICIAL TOPOGRAPHY



NATURAL ELEMENTS



MOBILE URBAN FURNITURE



Close Proximity Temporary Housing (CPTH - equivalent to APROP) in Ciutat Vella, Barcelona

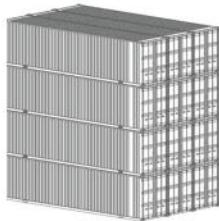


The battle against gentrification..

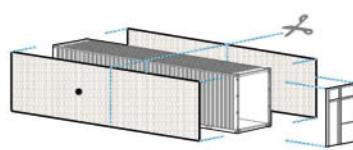
The “Alojamientos de Proximidad Provisionales” (**APROP**) intends to face this complicated situation. They are based on a strategy that responds in an agile, urgent and pragmatic way to emergency situations due to the lack of housing. They can thus help to avoid the forced eviction of the locals for economic reasons.

These housing facilities are characterized by being modular, transportable and demountable, allowing rapid mobilization of empty spaces in the city for periods of 5 or more years. These buildings can incorporate in themselves some public facilities and spaces for local use. In the case developed in the Ciutat Vella of Barcelona, the project is located between Nou de Sant Francesc Street and Josep Pijoan Street.

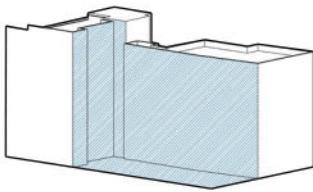
Phases



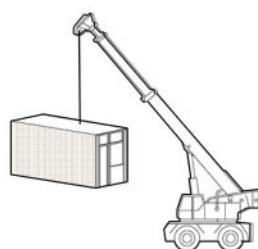
1 Bare prefabricated maritime containers



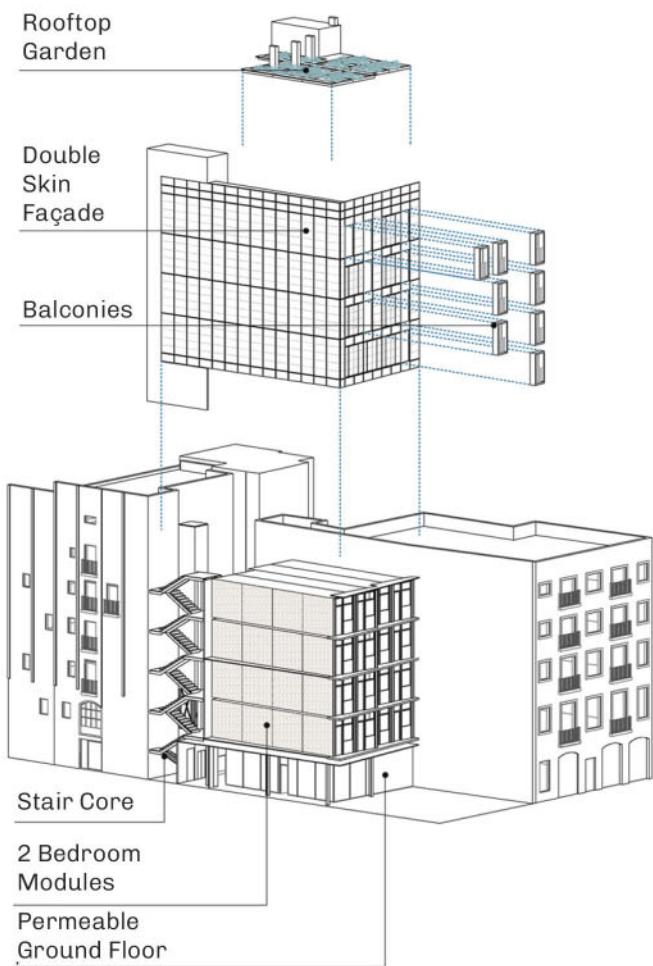
2 Preparing the containers



3 Preparing the site



4 Delivering ready containers to site



07 APROP - Close Proximity Temporary Housing

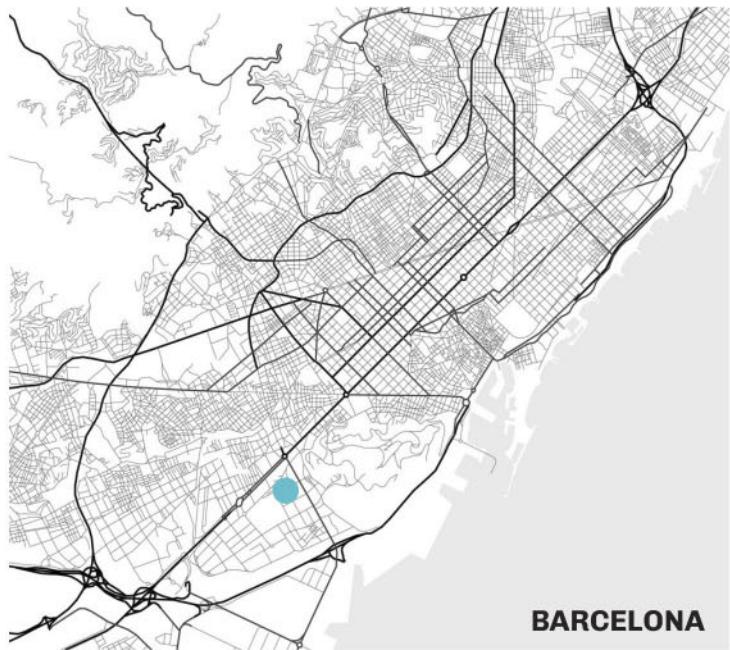


Beginning of Construction and Final Render

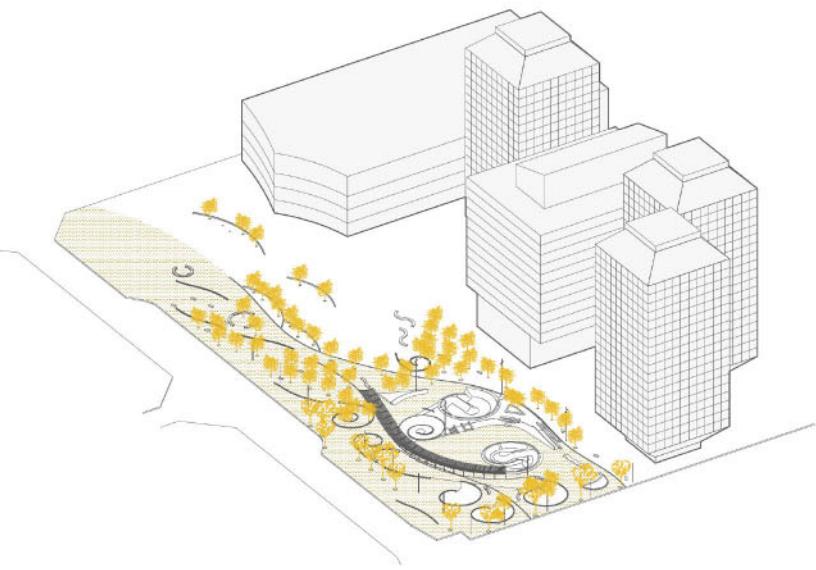


Plaça del Moviment Obrer

Participatory project
for the redesign of the
"La Marina de Port" park



Final Scheme



The proposed design is based on the **conservation**, **transformation** and **reproduction** of the existing elements of the park. It is about mimicking the new gestures with the existing public space, **avoiding** the introduction of **new design traces**. The spiral motifs and eye shaped design traces, characteristic of the original project by Toyo Ito Associates and Óscar Tusquets are recycled as a main motif, taking full advantage of the shapes and **providing more green and shaded areas**.

In response to a neighborhood demand collected in the program **"Pla de Barris"** 2016-2020, a project was prepared for the co-design of a public park. The proposal is a skateable park In the area of the "La Marina de Port" in Barcelona, which was renamed as **Plaça del Moviment Obrer**.

The main objective was the improvement and adaptation of the existing public space to meet the needs of the neighborhood, and specifically the skate collective, La Marina Patina.

"Recycled Design"

For this purpose, it was proposed to define a roadmap, a participatory methodology and the drafting of a preliminary project that would involve the neighborhood in the development of a project to boost the area. The intervention includes events in the neighborhood that mix diffusion, participation and sports, and recycling a design that incorporates the traces of previous designs.



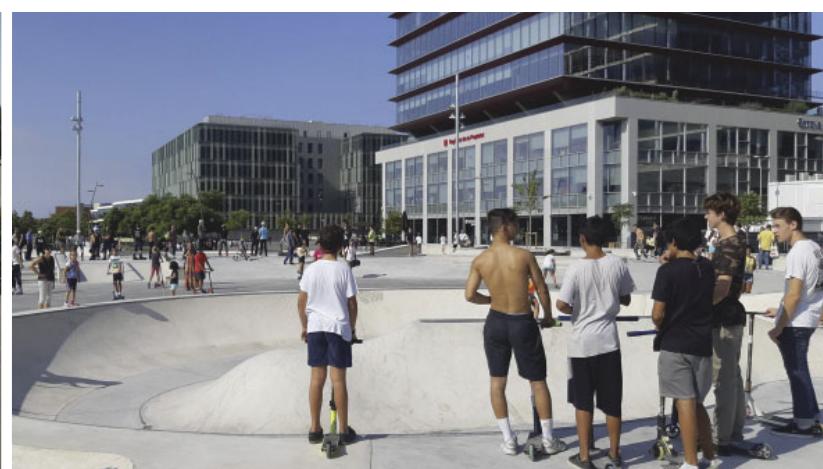
Existing Conditions



Final Proposal



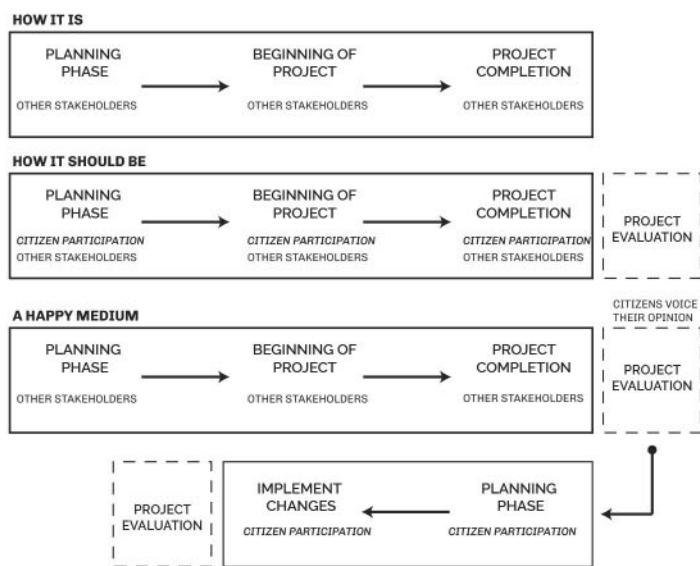
Participatory session with Community and Children



Construction begins | Construction finished | Render



Post-project Participation: The Process by Which Citizens Repurpose Public Space



"Participation can function if it is active, directed, and those who get involved experience a sense of achievement. At the same time it requires a reexamination of traditional planning procedures to insure that participation becomes more than affirmation of the designers or planners intentions."

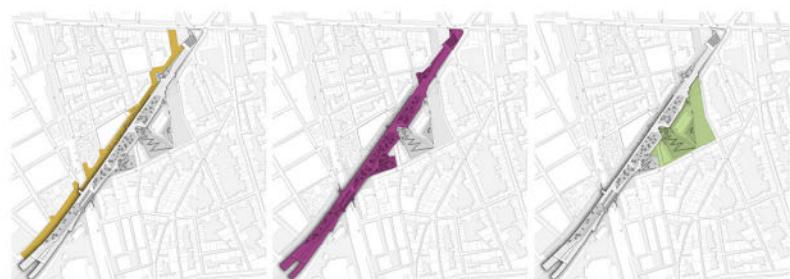
- Community Participation Methods in Design and Planning, Henry Sanoff (2000)

The Sans Neighborhood in Barcelona has been on the spotlight in the past few years, since the opening of its newest park: Jardines de la Rambla de Sants. This park has been controversial since its conception, and it seems that everyone in the neighborhood has a different opinion on it. From fighting to stop this project, to participating in the design of its "roof", this community has been through drastic transformations in a short period of time. The research conducts a **Social and Spatial Analysis** of the project as a method of understanding the true **perception** of the community, as well as understanding the areas of opportunities for the reclamation of the project. The argument is then that post-project participation can solve

issues involving conflict uses/ users, maintenance, accessibility, privacy and management, if the initiative is genuine and is initiated by the community itself.

The solution to all of this is giving control to the community. Being extremely careful with the words "giving control," It must be stated that only the ones effected by the project, can intervene in its regeneration. It is time for the evaluation period of the Cajon to begin, and for citizens to demand the changes they want to see in their environment.

Post-Project participation is a continuous cycle which continuously evaluates the project and uses the voice and hands of the community to implement said changes.



+ Phase 1

Urbanizing the street "Antoni de Capmany," which runs along the sides of the Rambla. In this process, the government workers began to prep the street to "receive" the access points to the green roof.

+ Phase 2

The Cajon itself. This included two sub-phases which was the enclosing of the train tracks, and the second was building a park on the roof of the structure. The phase where "Participation" happened.

+ Phase 3

The final phase of the Cajon, is one with an uncertain future ahead. The scope of work for the third phase involves large demolitions, over 100 expropriations, with over 70 families effected, were in the agenda.



Formalizing the informal street vendor businesses in Barcelona through digital means. **CONCEPTUAL**

One of the main challenges cities face is public space occupation by informal commerce. Nowadays in Barcelona there is no precise data about how many vendors are informally spread through the city. The visibility and the intersecting inequalities as well as their everyday struggle to carry on without legal authorization has turned

vendors into a target of police and other legal vendors.

I was part of a team that developed an application which would facilitate the lives of the "manteros" and provide social and legal assistance to them directly through the app. As well as function as a social network to facilitate interactions between them.

The Commons discourse is informed by an idea, which has been around for hundreds of years. In a contemporary context of much inequality, the Commons discourse introduces models of sharing. The Commons are about the assets that belong to everyone, forming resources that should benefit all, rather than being enclosed to just a few.

The workshop aimed to give us the power to initiate our own commons projects and

speculate on how to sustain them financially. To develop appropriate practice models based on the country and context they will be located. To critically understand the role and position of our practice within the field of commons and as part of a larger global network. To develop skills for co-operative and collaborative working and designing which sits within the Commons discourse. To develop models to assess impact via monitoring and

PARTICIPATORY (APP) DEVELOPMENT



Listening to issues



Initiating ideas



Collaborating UX design

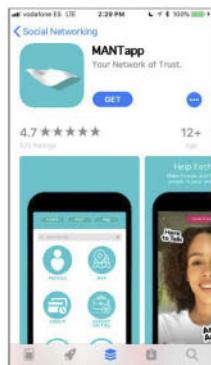


Testing app

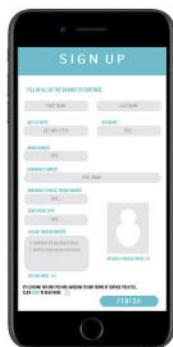


Evaluation/Reflection

App Interface



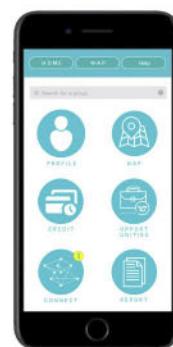
App Store Interface



Vendors can sign up and upload as little or as many legal documents they already have



Welcome Screen



Main Menu



Personal ID recognized as valid by the local government



Perhaps the most important aspect of the app, and what led to its development is the safety aspect and finding a way to formalize the informal. Through an interactive map, the vendors are able to "check-in" to an area, pre determined by the government, and carry on with their businesses without the risk or worry of police harassment.

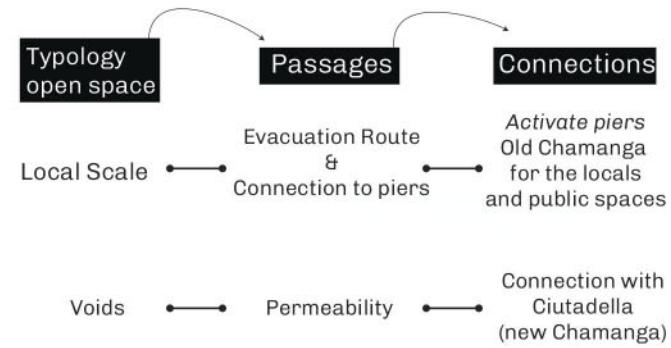
In the same map they are able to report problems or issues they are having, and we - the legal end - will find solutions to those problems.



Workshop held in Chamanga, Ecuador in order to asses the damages done by the 2015 earthquake and propose low cost design solutions to the town.



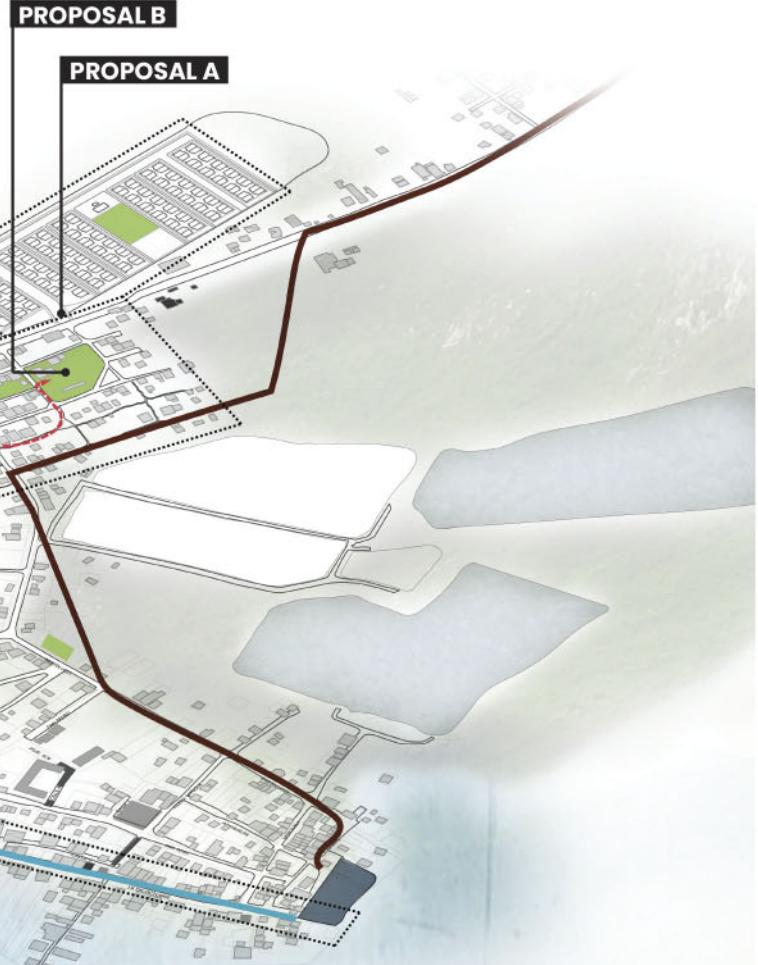
Opportunities

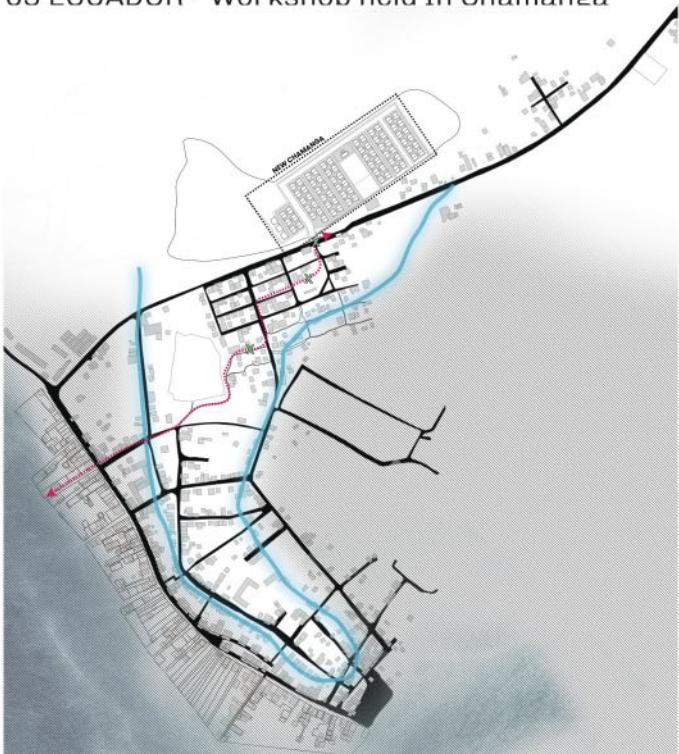


Chamanga is a small village on the coast of Ecuador, which was heavily affected by the 2015 Earthquake. A large portion of the village was completely destroyed, in part because of the poor construction methods, using concrete without any reinforcement, and the other part because of cutting down mangroves in order to create shrimp farms; the major economy of the village. Surprisingly enough, all of the vernacular architecture built with bamboo was able to withstand the ground movement, winds, and heavy water flow. The international aid that came to the village was a great help, however, when it was finished it left the locals in a precarious state. The

Government of Ecuador created new modern houses to accommodate a large portion of the village, however, as we later discovered, it only created more problems and conflicts amongst the neighbors.

With this workshop we had the opportunity to walk the village and feel first-hand the problems that are present. Each team was assigned a specific part of the territory to analyse. What is highlighted here are the proposals for the **“public open spaces,”** which are spaces full of opportunity for us to intervene and propose solutions which are **viable, economical, and overall safe**, because of the territorial





The shaded area represents the zones which are in high risk of flooding and therefore cannot and should not be built on. Instead they should be renaturalized with mangroves. The path which we found while doing site surveys is one that the locals actually prefer taking. It is a type of "cow path" which are more convenient then the actual streets itself. The plan was then to formalize these informal paths and create an escape route through them, in case of emergencies, and create rest areas throughout them.

PROPOSAL A



While speaking with the locals we noticed that they talked about the "new Chamanga" as if it were a different town all together. Indeed it was constructed in an area which was just open fields before. The proposal would be to reconnect the two sides of the large road by creating road bumps to force cars and trucks to slow down, and then promote new businesses by the intersection to create an ecosystem of people that would use the space to come together and interact.

PROPOSAL B



Proposal B is to convert a concrete pad into a meeting point, sheltered by a bamboo structure. In an eventual disaster, the village could gather here and be protected from the elements and if were to get even worst, it would act as a distribution point for aid and water. During our trip, we noticed already a few business that spill out into the pad, as well as kids playing while their parents watched. A simple solution that could emphasize even more a sense of togetherness.

PROPOSAL C



Proposal C is a plan to formalize the informal footpaths with pavement, stopping points and rest areas. Although it is very used by the locals already, we noticed a certain difficulty to navigate. Often times we were mirroring each step of our local guide, who knew exactly where to step. It was then clear to us that a formal and paved path could potentially be the most important of all proposals, allowing a quicker reaction time to any disaster.

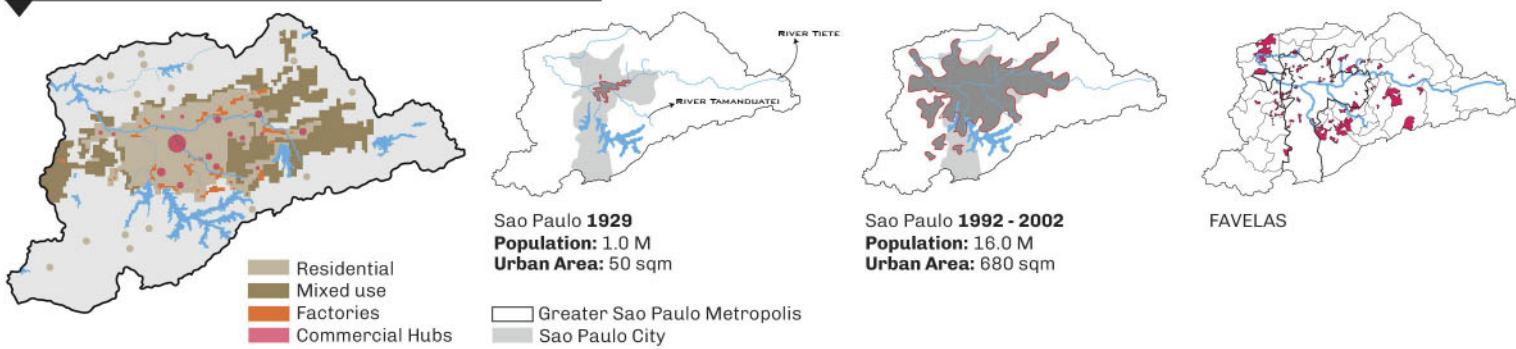
Bachelor Thesis proposal
for the activation of São
Paulo's deprived city center.



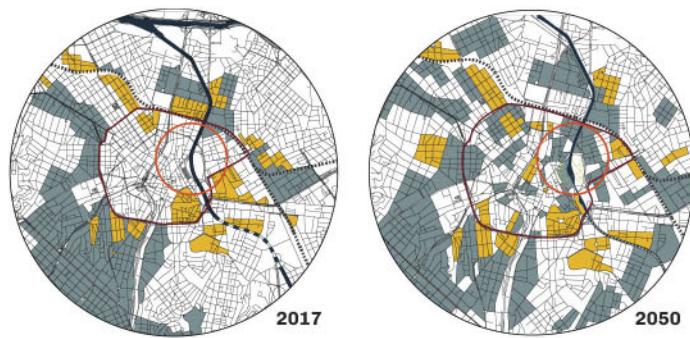
Sao Paulo's **fast development** resulted in the violence against, and the degradation of its rivers, that were suffocated by progress, which was preceded by violence against humans. The **safety** of some areas has led to the crowding of people in businesses, while non-safe areas have been **abandoned** and forgotten. The **unbalance of useable space and dense population** has created social, economical, and physical problems city wide. A series of interventions aim to relieve that unbalance, while restoring the cities **relationship** to the Tamanduatei River.

Sao Paulo grew from the margins of the **Tamanduatei River**. The growth, however, was **sporadic and unplanned** which caused the city center and the same river to be abandoned. From 1929 to 2000 the population jumped from 1 million inhabitants to **16 million**. This major "Oil Stain" of a development had/has its problems. As the population began to move from the city center to the peripheries, the city center saw abandoned buildings, abandoned streets, crime spike, pollution, degradation, lack of investment in infrastructure, and squatters.

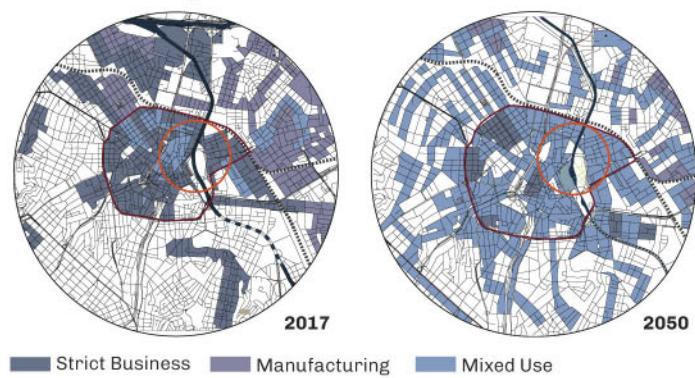
Analysis



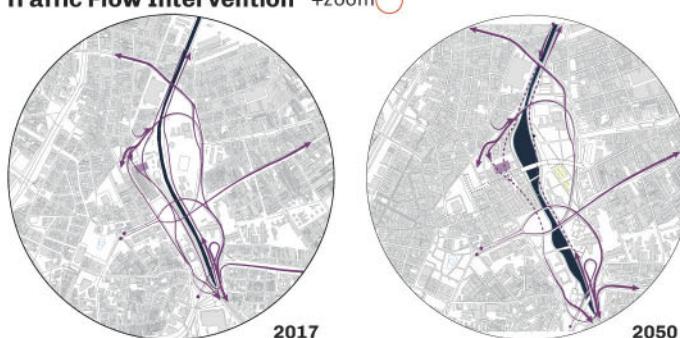
Residential Transformation



Strict Business/Mixed used Transformation

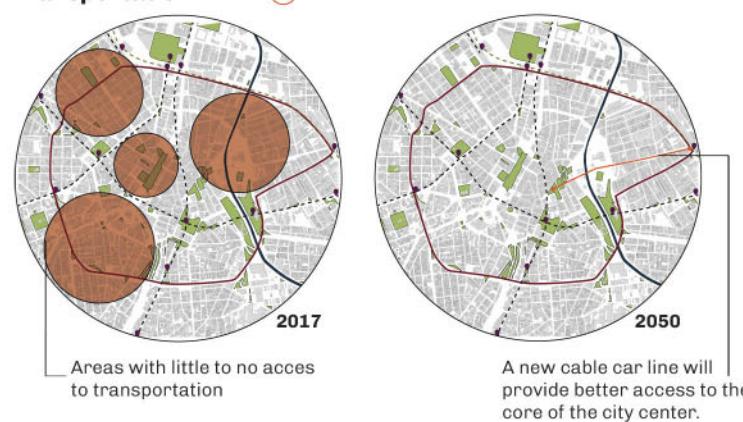


Traffic Flow Intervention +zoom

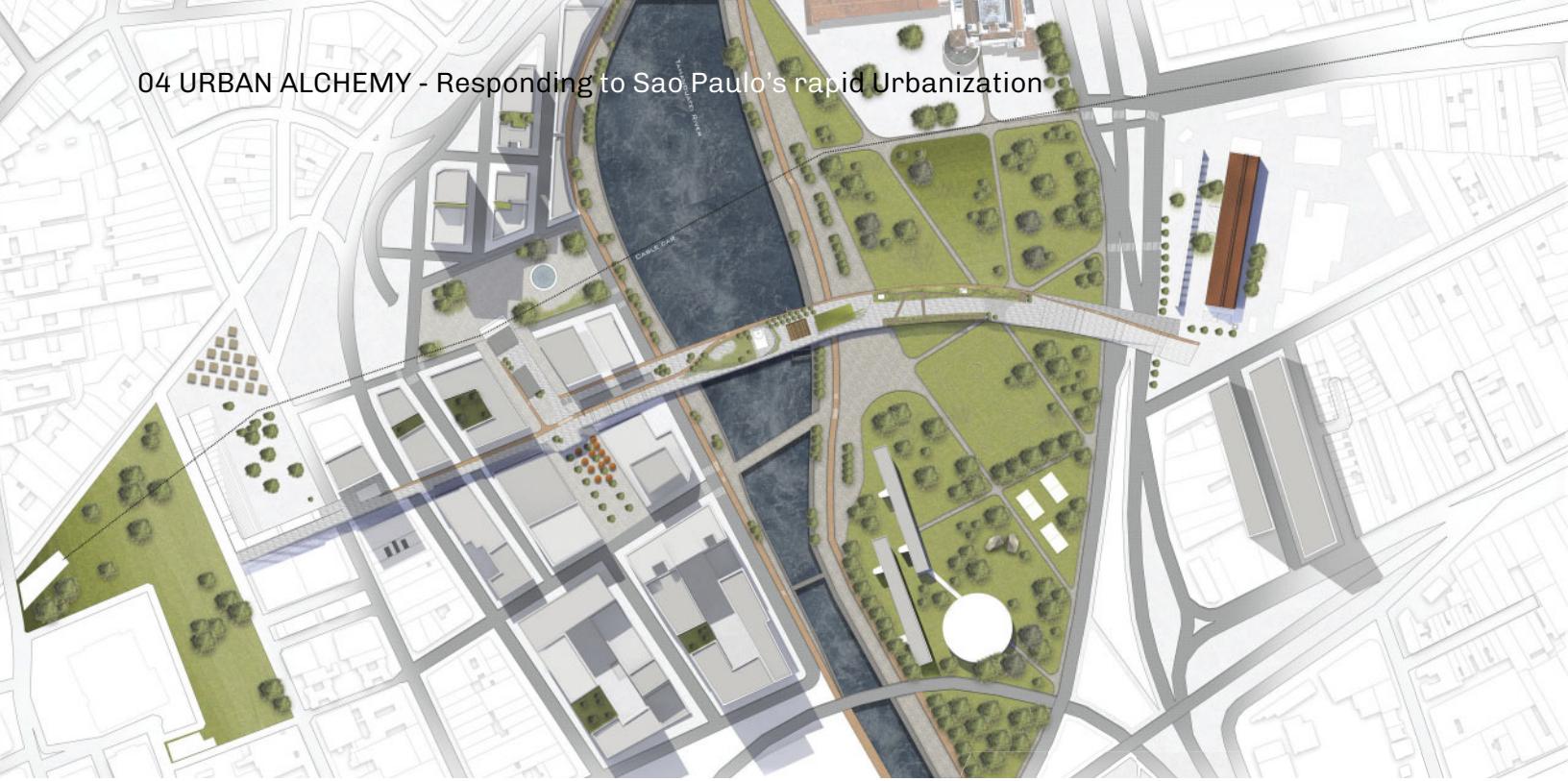


Moving the current highways underground is essential to creating a pedestrian friendly neighborhood

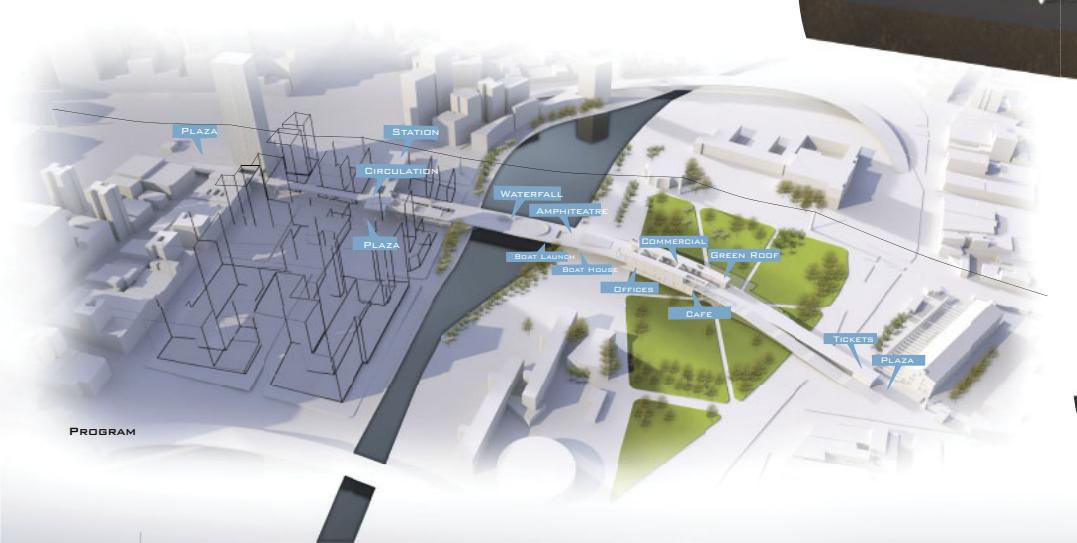
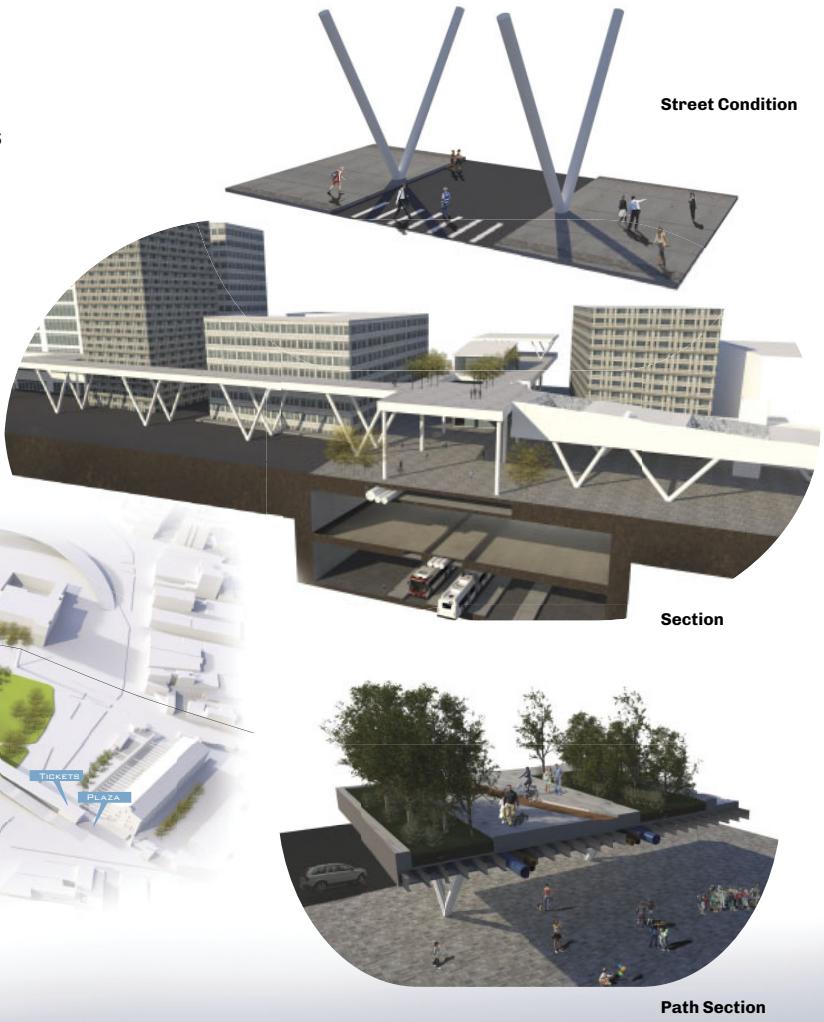
Transportation +zoom



04 URBAN ALCHEMY - Responding to Sao Paulo's rapid Urbanization

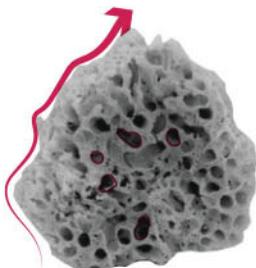


The final proposal was one of an active pedestrian bridge with amenities and water views. The activation of the river hopes to revive the city center and bring businesses and people back. The list of interventions includes a new neighborhood with mixed uses, a new culturahub, new transportation lines and outdoor activities. The once “dead” and forgotten area of São Paulo would see a spike in interest from developers and regenerate a healthy life. The goal was always to reclaim as many buildings as possible, and have a light bridge structure that did not touch the ground in abrupt ways.



Proposal for Red Hook in Brooklyn, NY. 2nd Place competition winner.

This project is done in partnership with two other peers from a design semester which was done in a competition format. We approached the design by trying to answer 3 questions: **WHY? WHAT? And HOW?**



Sponge Concept. The porosity of the sponge and its ability to retain water seemed like the right metaphor for a resilient coast.

WHY?

Red Hook is Brooklyn's hidden potential. It is a rapidly evolving mixed use neighborhood with stunning waterfront views, a working waterfront, artist colonies and urban farming. It is home to New York's second largest public housing projects. Its history filled streets are waiting to be rediscovered. The lack of accessibility have hindered its growth. Pollution of water, soil and air have kept its residents from making use of their own neighborhood. The increasing flood levels has contributed to the lack of development in Red Hook.

WHAT?

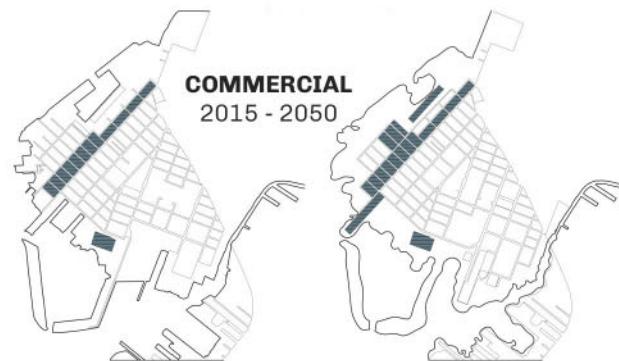
Our team proposes to re-introduce Red Hook to the metropolitan area. This will be done by activating the waterfront, increasing the transportation and providing a controlled flooding environment. Furthermore, we will provide increased productive land and allow residents to grow with their community.

HOW?

Our proposal includes a series of steps in which Red Hook will gradually transform into a resilient neighborhood through a system that resembles a sponge. Our approach is comprised of islands, marshes, and eco resilient pathway, gated basins and a green waterfront extending inland to existing space. Bringing the "sponge" into the grid.

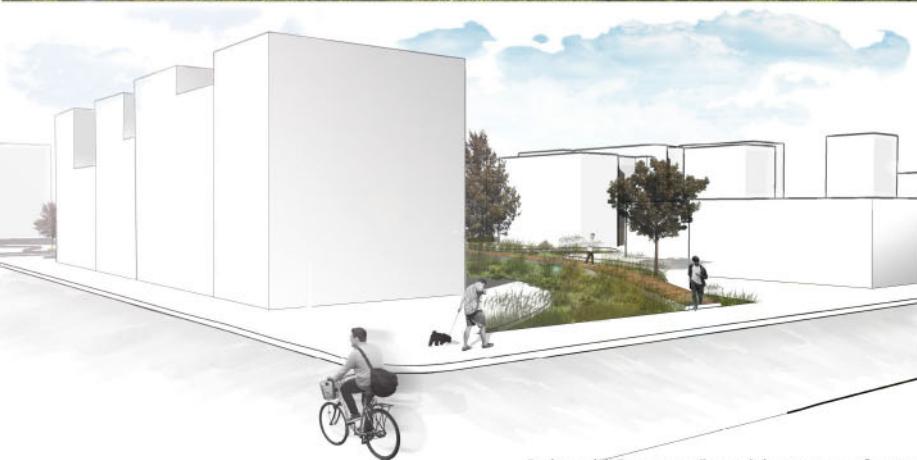


Marshes and pedestrian path

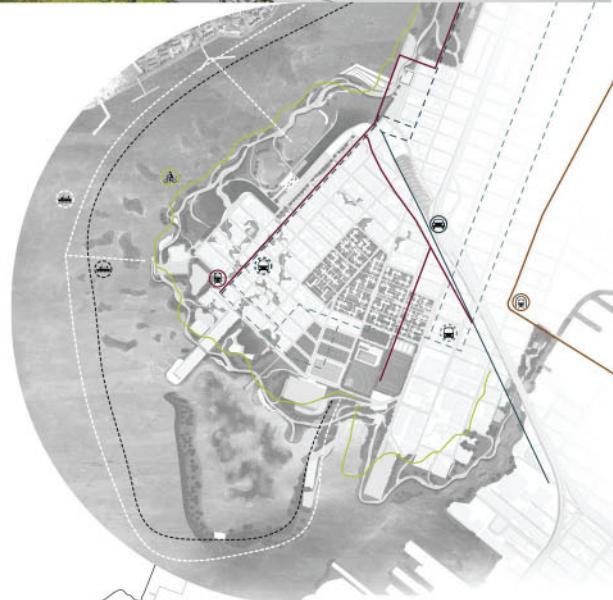


Master Plan

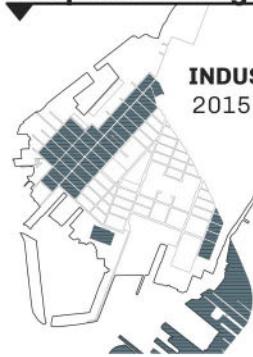




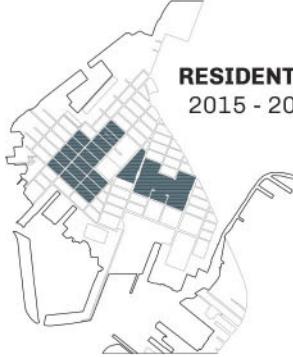
Inland "Sponge" making use of empty lots to create water retention areas.



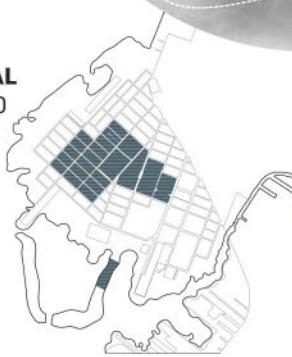
Proposed Changes



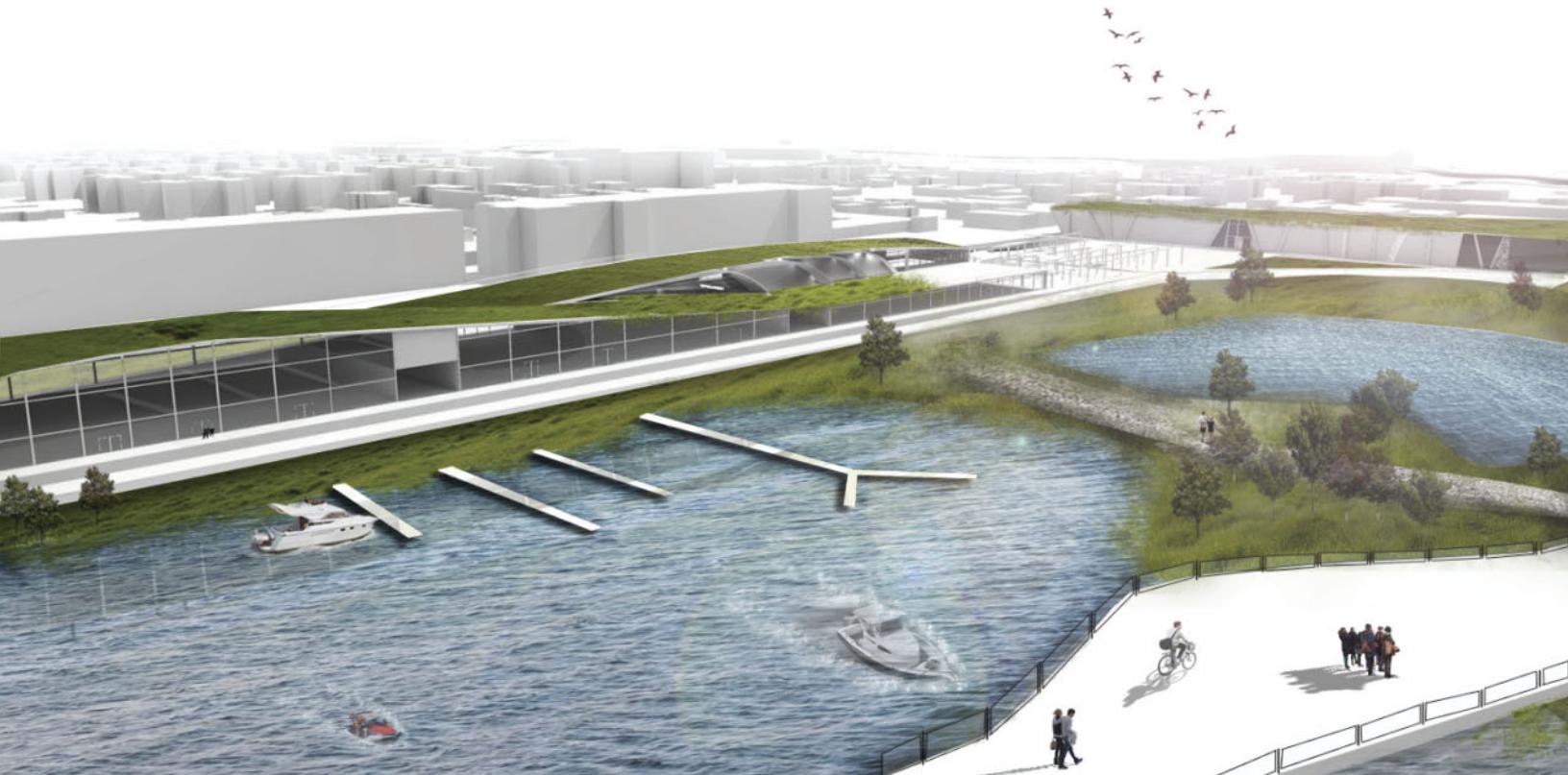
INDUSTRIAL
2015 - 2050



RESIDENTIAL
2015 - 2050



TRANSPORTATION NETWORK



Red Hook Library

Library and community center for the neighborhood of Red Hook, Brooklyn.

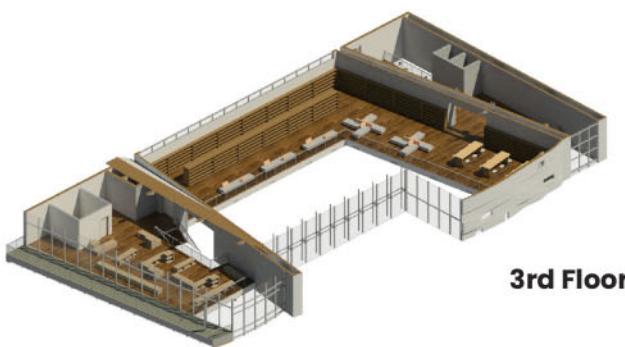
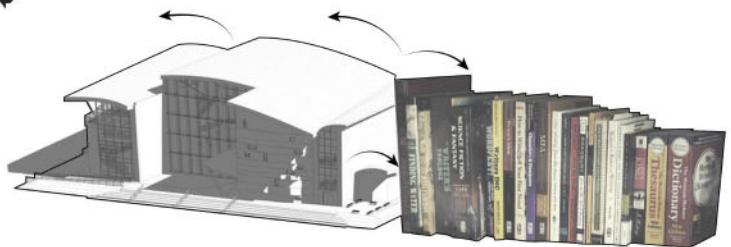


Site Plan

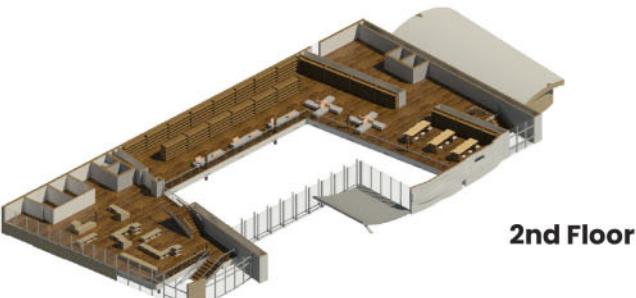
The project is located on the corner of **Dwight and Walcott st**, in the neighborhood of Red Hook, Brooklyn. The project intent is to create a **library to become the new center for Red Hook**, while responding to the typologies of its surroundings in an innovative and sustainable way. The design responds to the the 100 year flood maps, sitting higher up than street level. It also aims to implement **efficient** heating and cooling methods.

The block in which the site sits in is looked at as a **“bookshelf.”** All the houses and apartments stacked next to each other are the **“books”** in this bookshelf. The massing and organization of the library itself are done in a way in which to resemble an **open book** with the curves of the pages.

Concept



3rd Floor



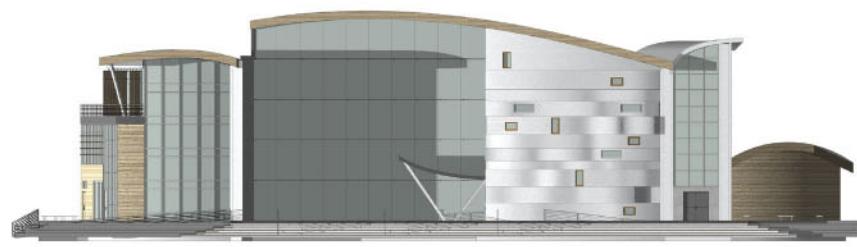
2nd Floor



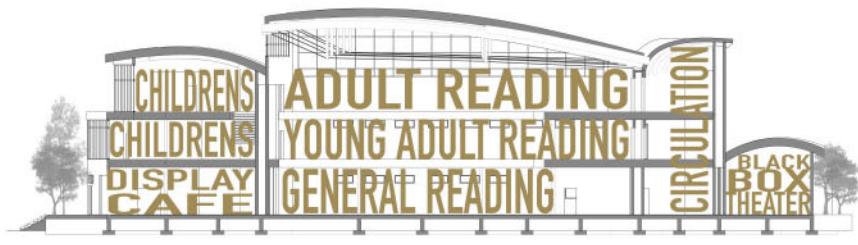
1st Floor



SE Elevation



NE Elevation



Program

