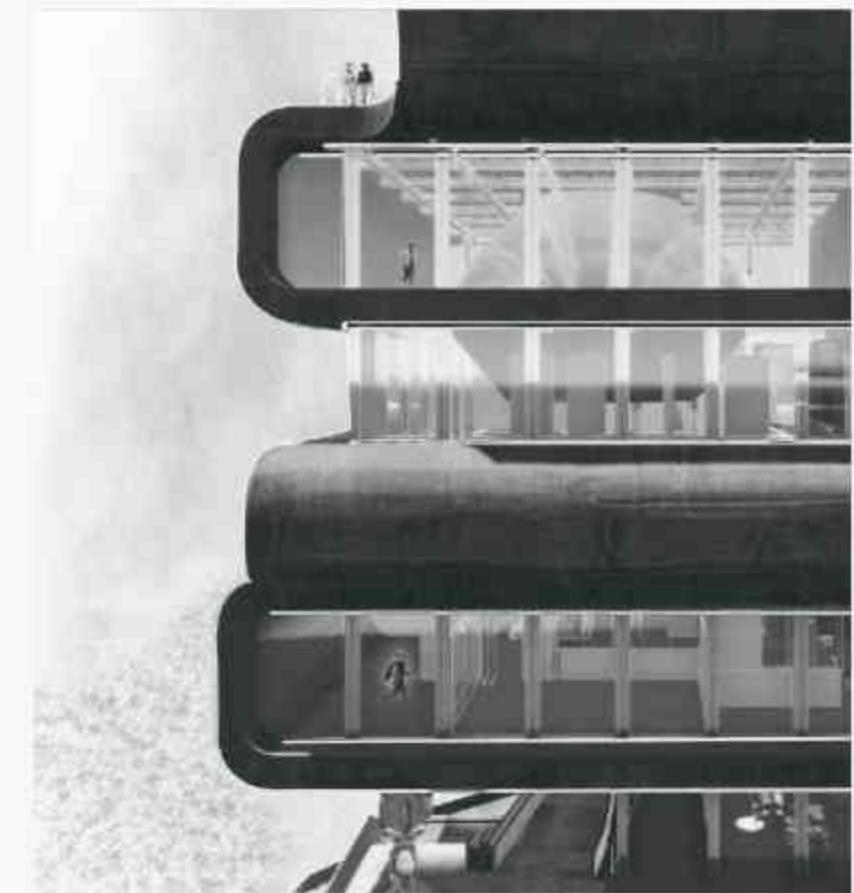


Exterior view with transparencies.



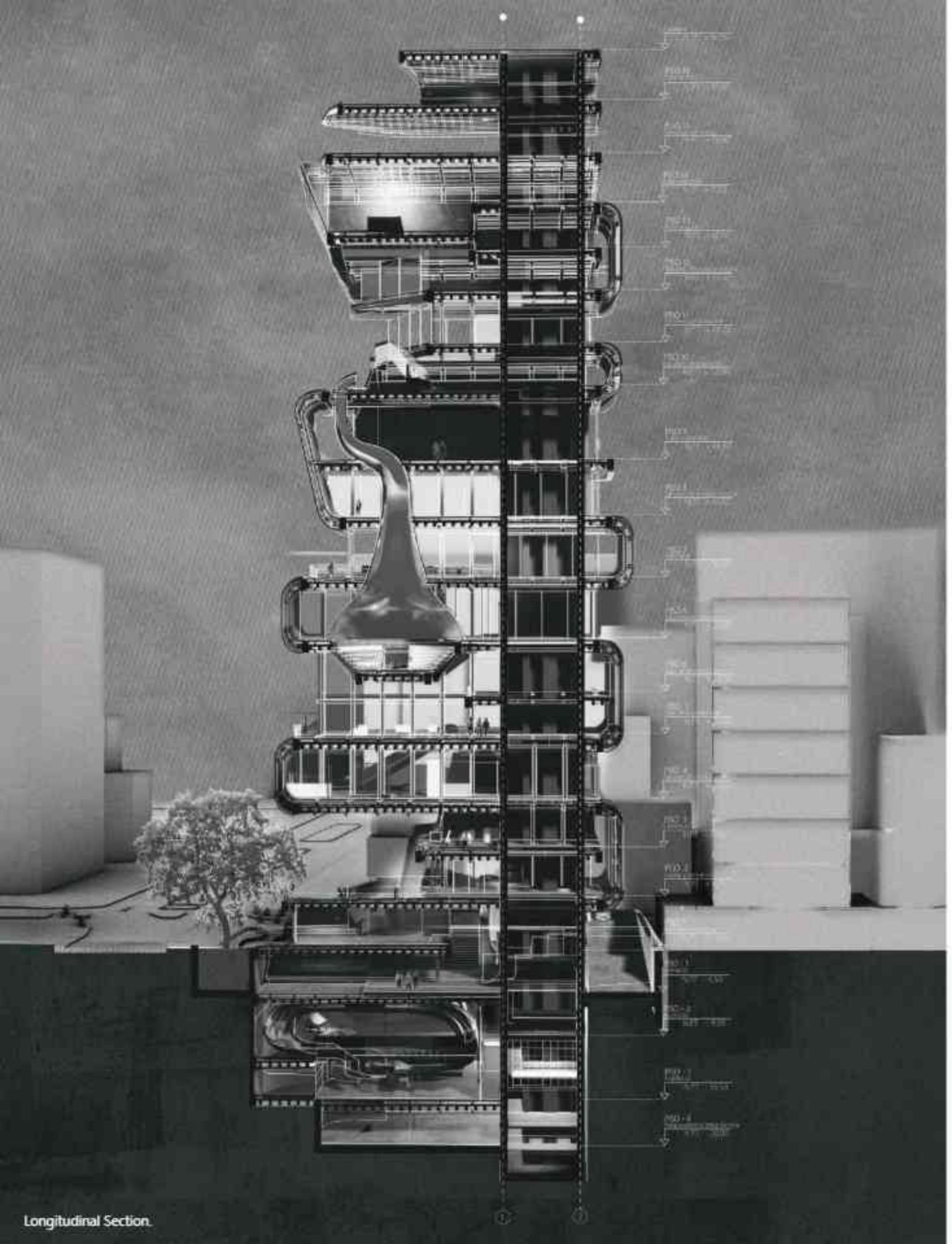
Outside zoom

Bogotá, the vibrant capital of Colombia, is a melting pot of indigenous, Afro-descendant, mestizo, and foreign cultures. Odeon Center, born from this diversity, is a cultural hub embracing music as a universal language. Its unique, folded design symbolizes fusion, offering spaces for exhibitions, workshops, and concerts. Beyond its physicality, the center promotes social integration, incorporating local art to celebrate Bogotá's cultural richness, becoming an iconic landmark that unites diverse communities.

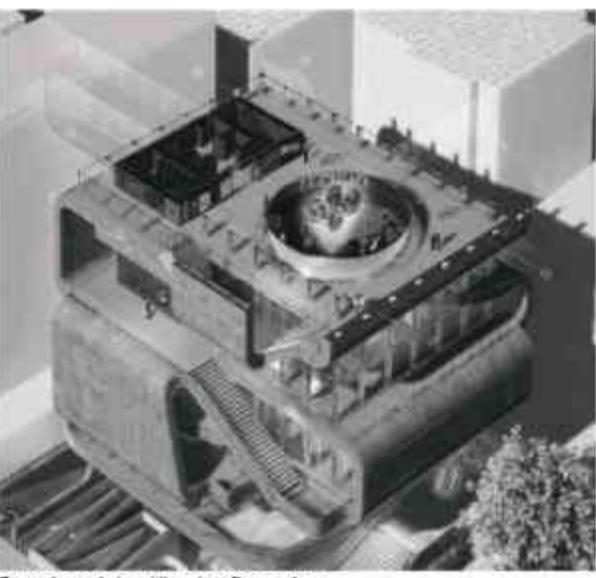
Odeon Center in Bogotá is a cultural nexus where music bridges diverse cultures. Its distinctive folded design signifies fusion, housing spaces for exhibitions, workshops, and concerts. Beyond aesthetics, the center integrates local art, becoming an iconic landmark that fosters social cohesion, uniting Bogotá's diverse communities.

Odeon Center

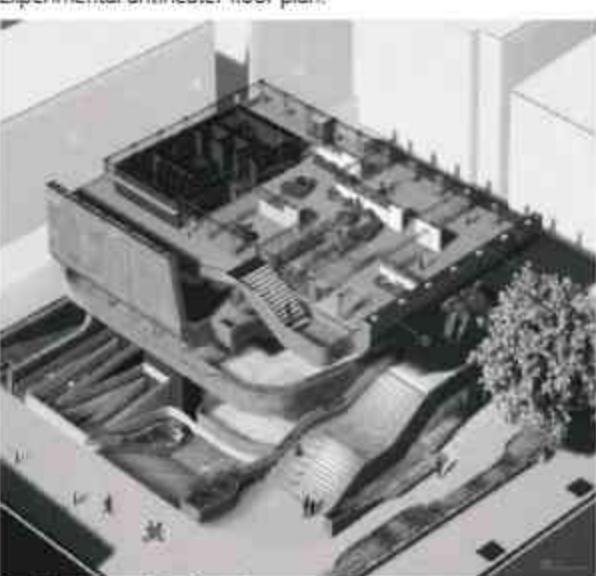
Type: Academic
Course: Integrative Project
Professors: Claudio Rossi - Daniela Atencio
Date: Spring 2021
Collab: Sofia Hernandez



Longitudinal Section



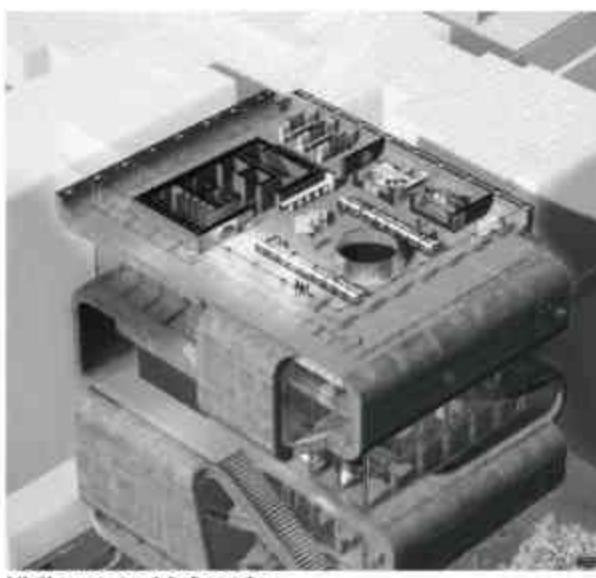
Experimental antineutrino floor plan.



Fourth axonometric floor plan.



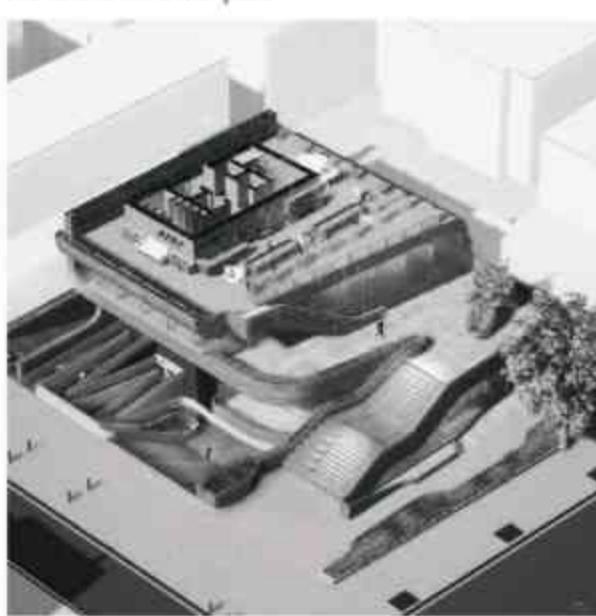
Auditorium axonometric floor plan.



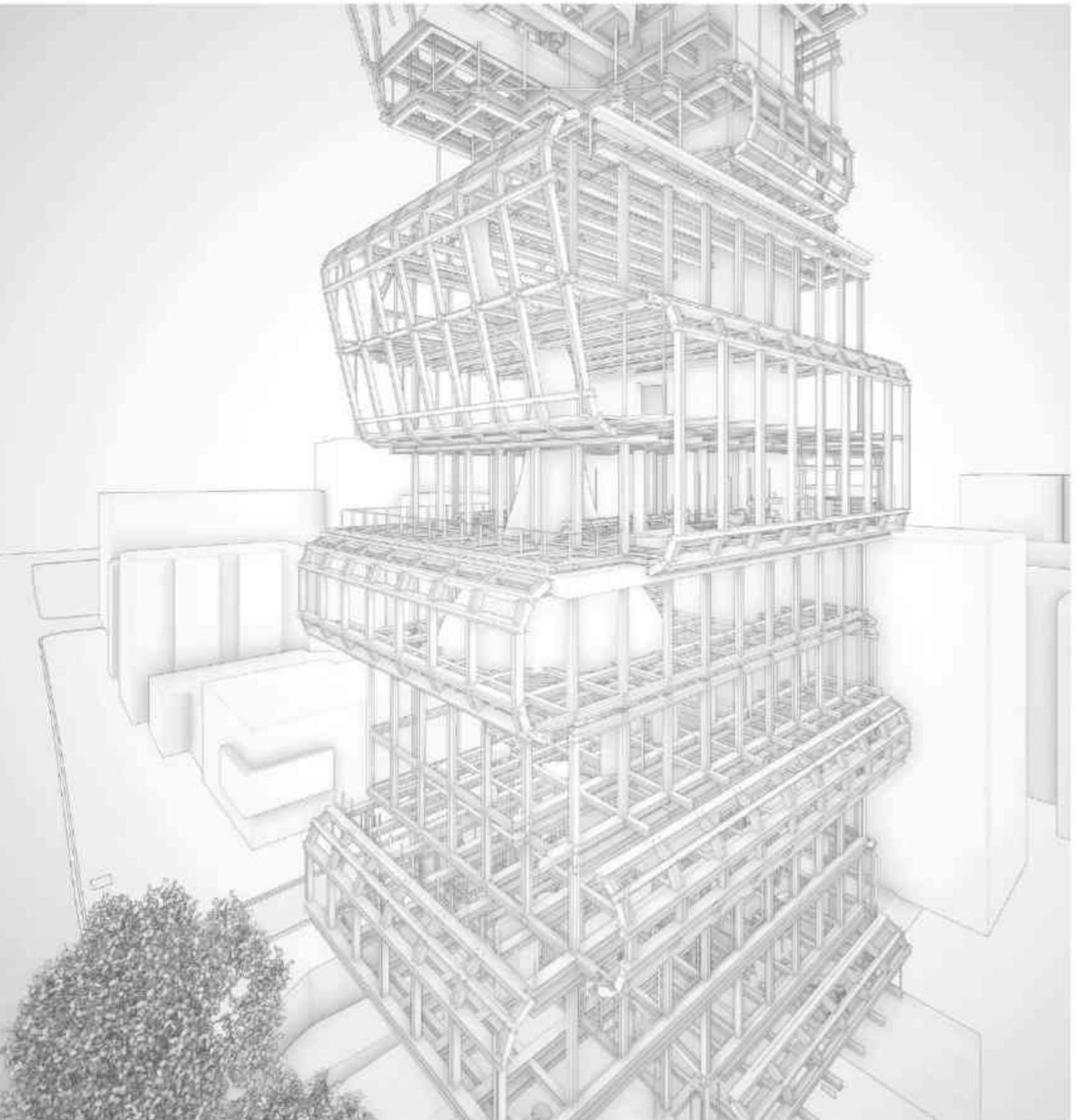
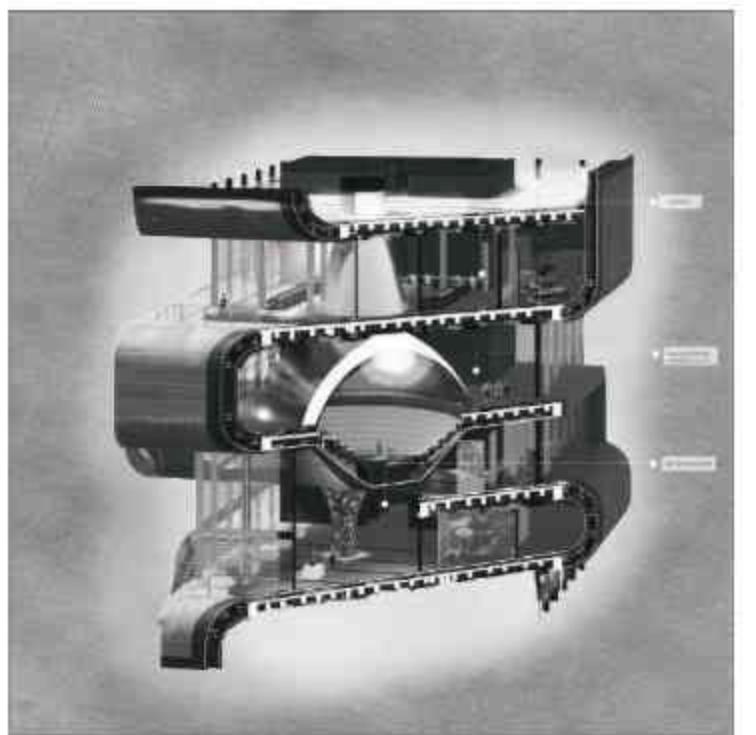
Ninth axonometric floor plan.



Fifth axonometric floor plan.

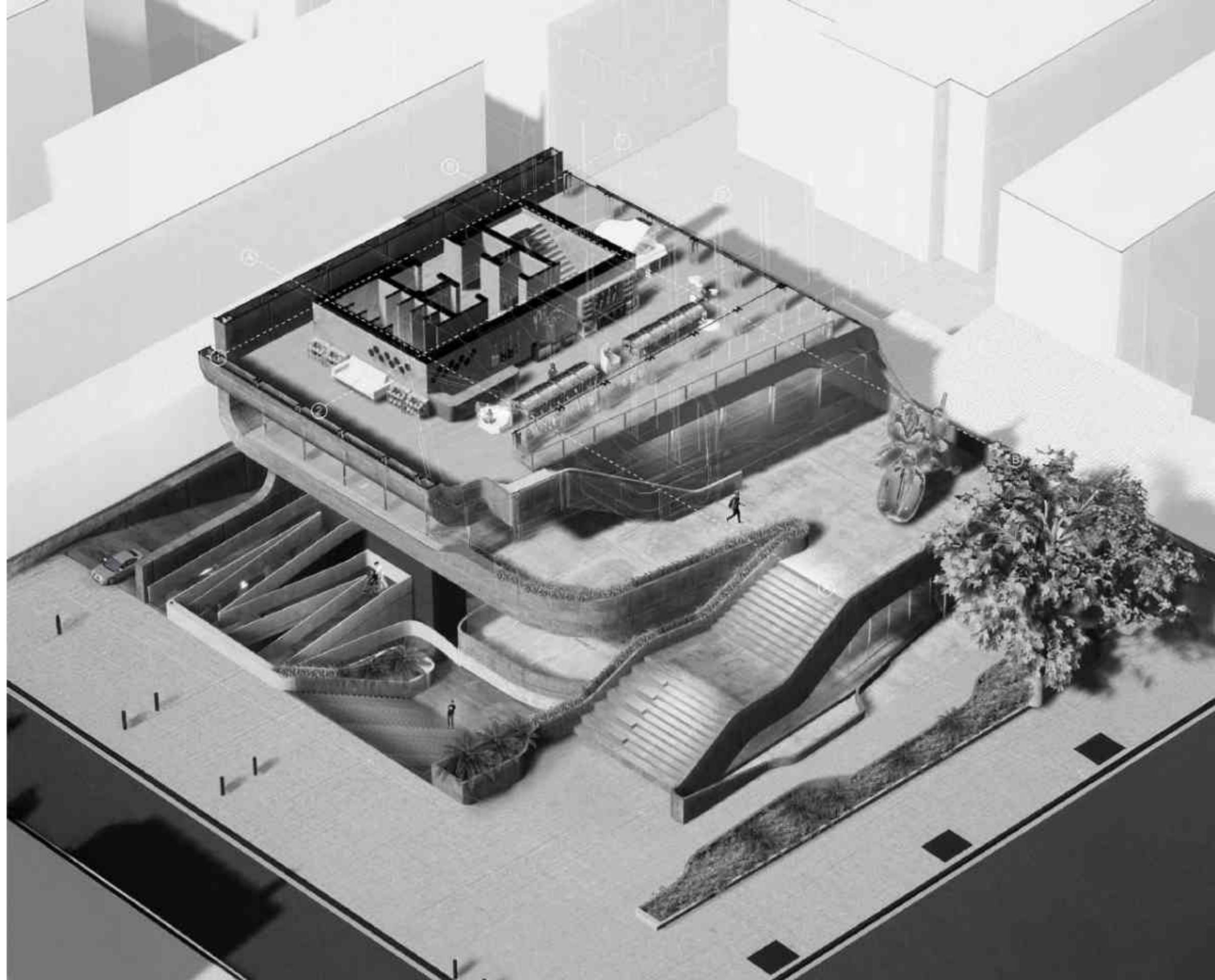


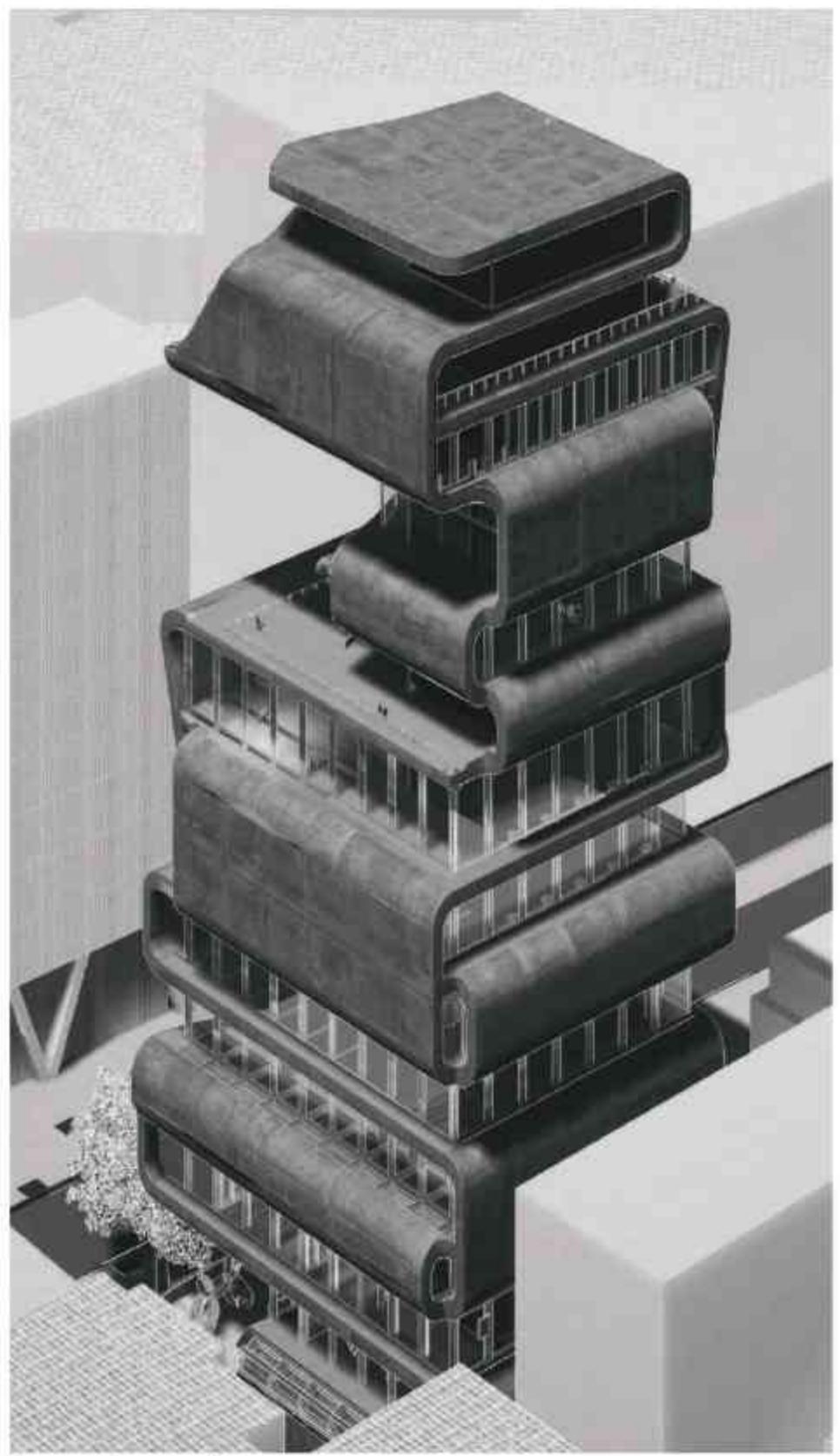
Second axonometric floor plan.



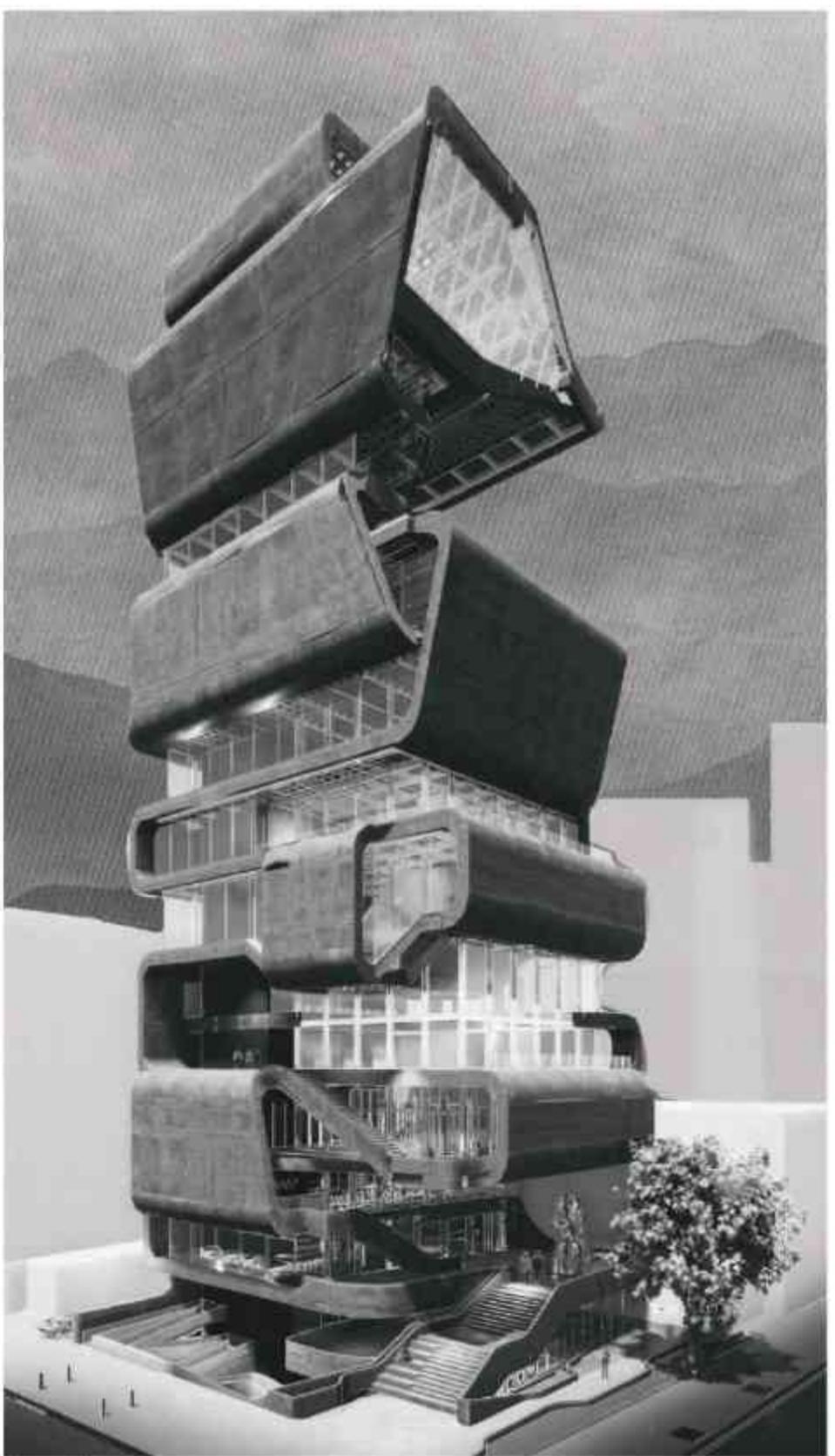
The project explores the interplay between structure and perception through a combined system of metal and concrete panels. This hidden structural framework is responsible for creating the illusion of a folding form that grows and ascends toward the sky, as if it required no visible support. The architecture blurs the boundaries between mass and weightlessness, making the folding form appear self-sustaining. At its core, the project houses a central space where sound is free to travel, transforming the entire building into a resonating instrument that amplifies and enhances the auditory experience, allowing music to shape the spatial atmosphere.

The project is guided by a clear intention: to dissolve the boundaries between architecture and ground, allowing the building to appear as though it emerges naturally from the earth. Rather than being an object placed onto the site, it is conceived as an extension of the landscape, where flowing forms and topographic gestures anchor the structure to its context. This organic fusion with the terrain goes beyond aesthetics—it reinforces a narrative of belonging, continuity, and respect for place. The architecture is thus perceived not as an imposition, but as a mass sculpted from within the site itself, growing outward as part of the land.

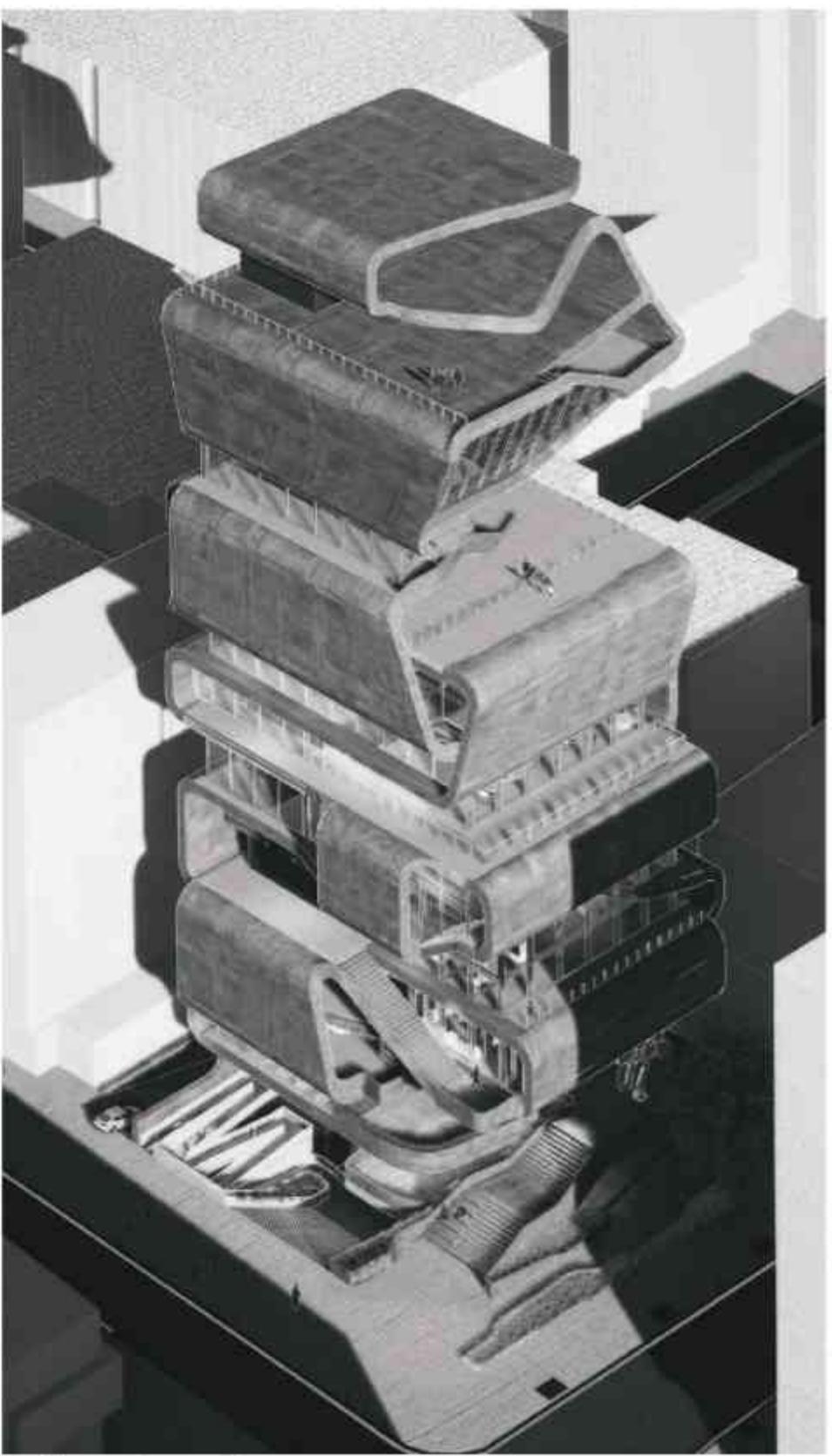




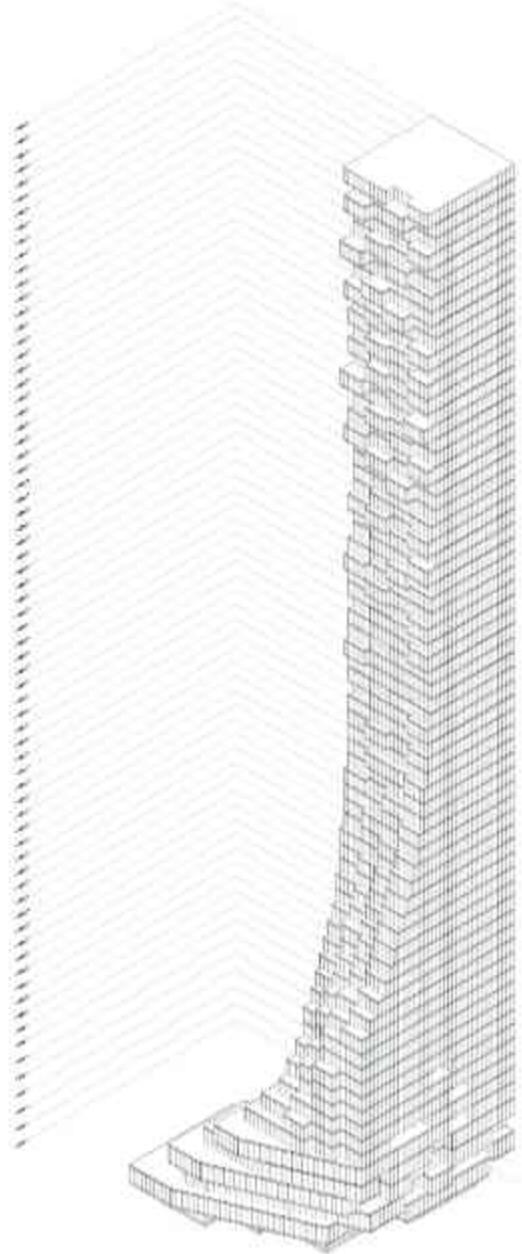
Rear general axonometry.



Perspective.



Frontal general axonometry.



Re Thinking BIM

Pixelated Spaces

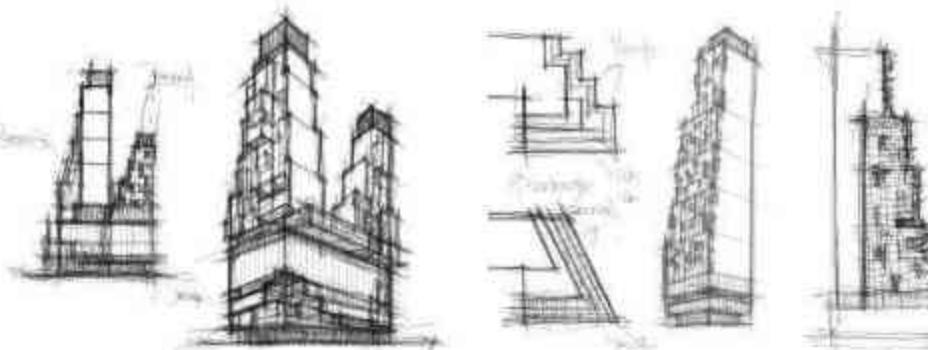
Type: Academic

Professors: Joseph A. Brennan

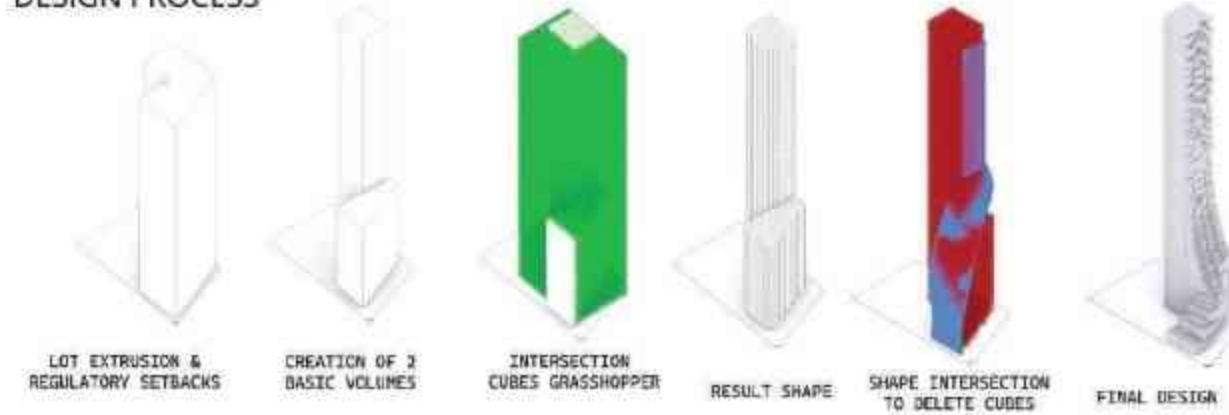
Date: Fall 2024

Collab: Sofia Hernandez and Sebastian Dominguez

INITIAL SKETCHES

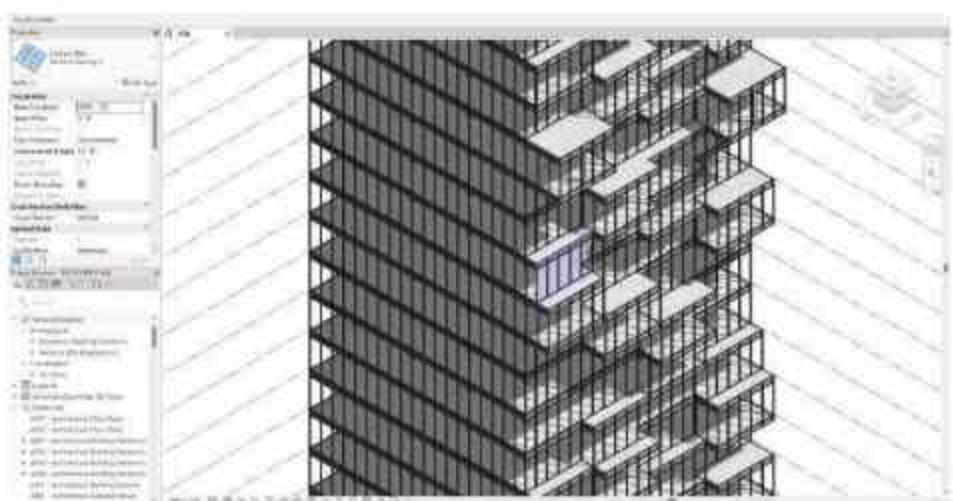
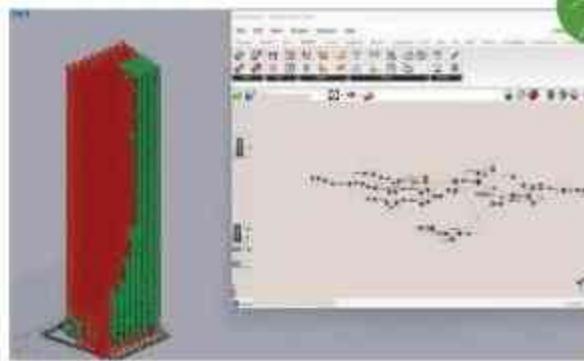


DESIGN PROCESS

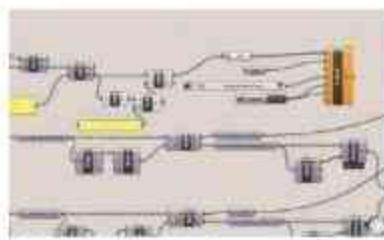


GRASSHOPPER

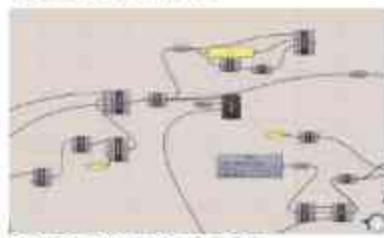
Through Grasshopper, the initial form of the building was defined, allowing for the parametric generation of all components, including slabs, columns, walls, and windows. This process enabled iterative explorations of different design approaches, optimizing spatial and structural relationships.



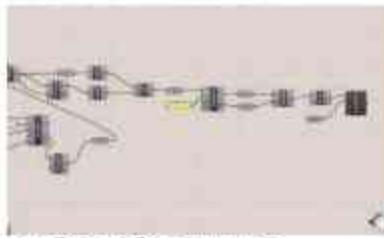
Revit not only facilitates the transfer of parametric models but also enables dynamic interaction with Revit's family system. Once the model is fully integrated, elements like the façade can be adjusted directly within Revit, allowing for design modifications that respond to technical, aesthetic, or performance requirements while preserving parametric control.



CODE FOR WALLS



CODE FOR FLOORS

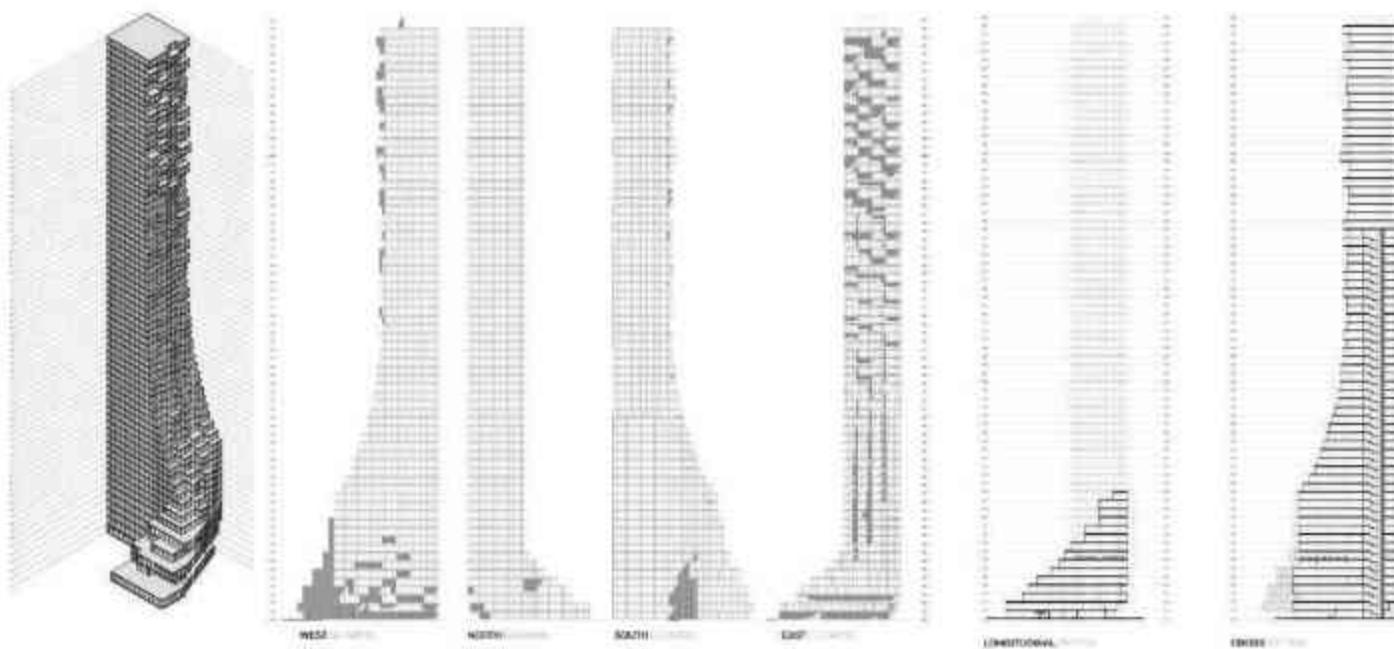
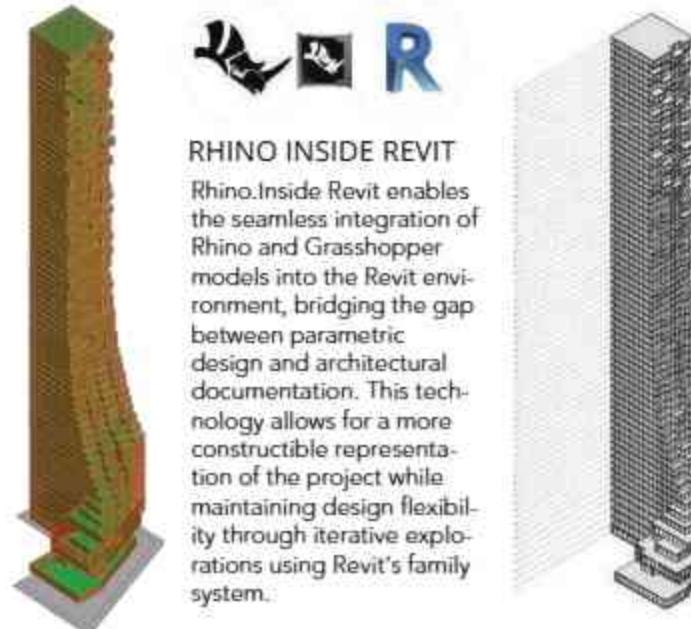


CODE FOR COLUMNS



RHINO INSIDE REVIT

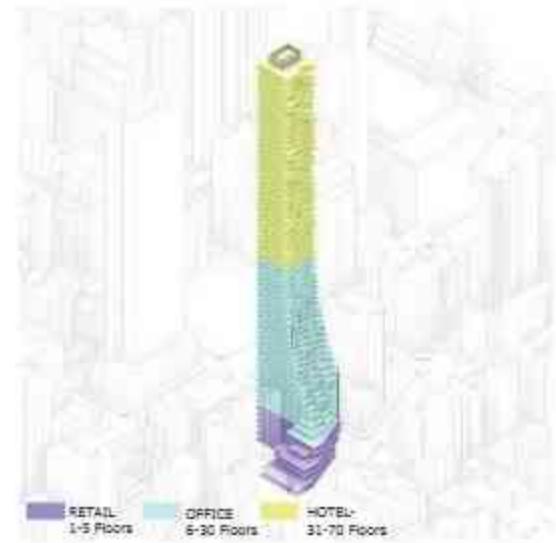
RhinoInsideRevit enables the seamless integration of Rhino and Grasshopper models into the Revit environment, bridging the gap between parametric design and architectural documentation. This technology allows for a more constructible representation of the project while maintaining design flexibility through iterative explorations using Revit's family system.



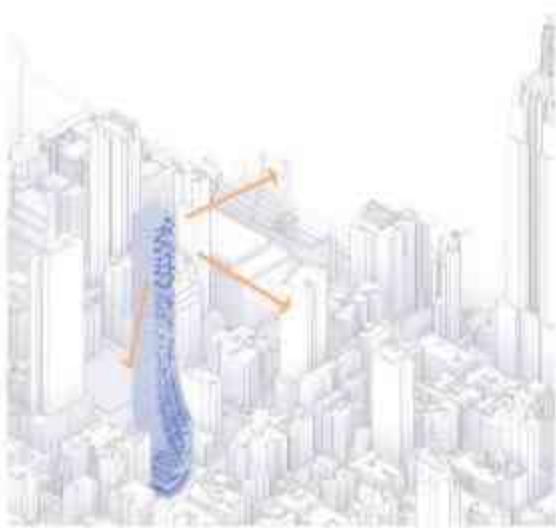
In traditional architectural practice, space is often a fixed entity—designed, built, and inhabited without much room for evolution once it is complete. However, with the advent of digital tools and parametric design, architecture is no longer limited by static forms or predefined solutions. Instead, spaces can be reimagined and reconfigured according to the shifting demands of its users. Dynamic Form brings to life the potential for architecture to evolve, much like the way a living organism adapts and responds to its environment.

By incorporating real-time data and flexible parametric models, Dynamic Form creates an architecture that is responsive, efficient, and ever-changing. This project questions the rigidity of traditional architectural methods and embraces a vision of spaces that can mutate and transform in response to their environment, their users, and even the passage of time. In doing so, it introduces a new paradigm of adaptive architecture that not only meets the needs of today but is capable of evolving to meet the challenges of tomorrow.

This project goes beyond just form-making: it explores the relationship between design, technology, and construction, examining how digital design can be seamlessly integrated with building systems to create more sustainable, responsive, and efficient spaces. The use of parametric design allows for the creation of dynamic forms that can change in real-time, optimizing energy efficiency, spatial organization, and user comfort.



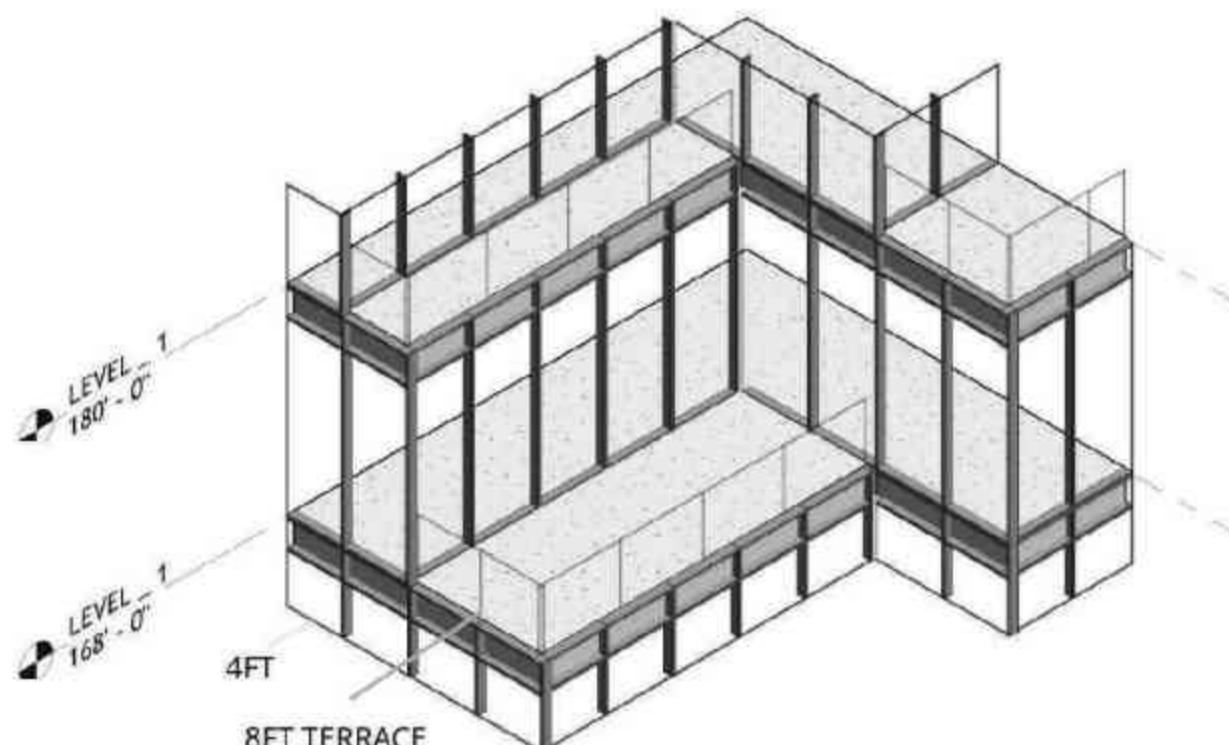
SEPARATION OF USES



MODULES TOWARDS VISUALS

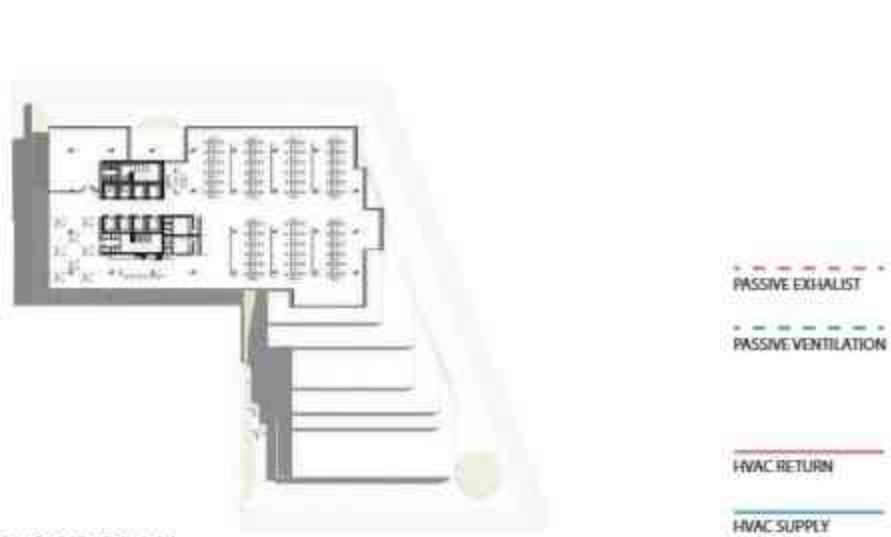


SITE PLAN

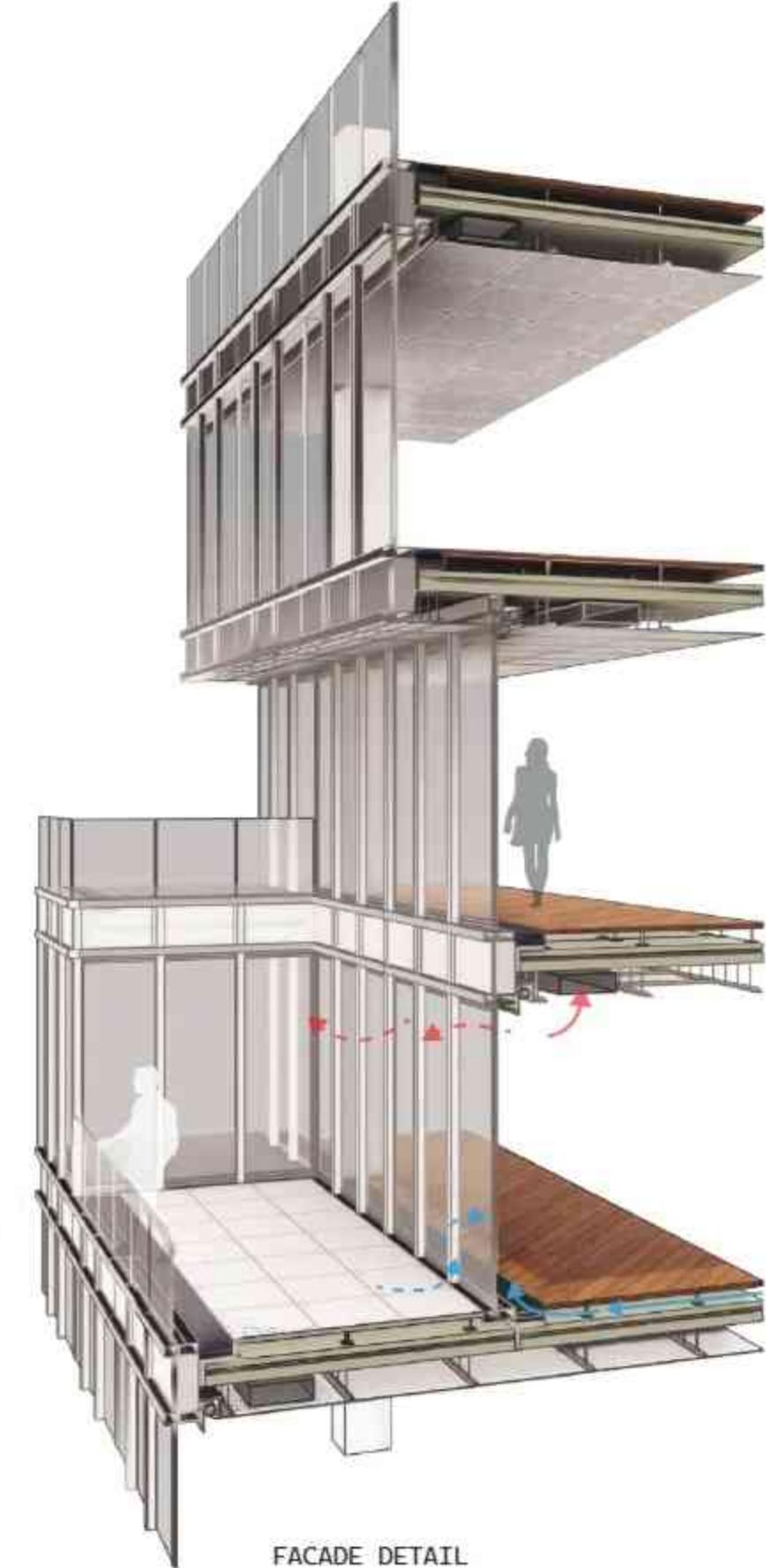


MODULAR DESIGN IN CURTAIN WALL
WITH 4 FT WINDOW MODULE

The design intention was to create a pixelated pattern on the façade, enhancing the spatial richness of the upper floors where the residential units are located. This pattern not only provides a dynamic visual experience but also frames incredible views of the iconic **New York City skyline**. The play of light and shadow across the façade adds depth to the building while offering residents a unique connection to the ever-changing urban landscape of New York, a city defined by its contrast of dense structures and expansive vistas.

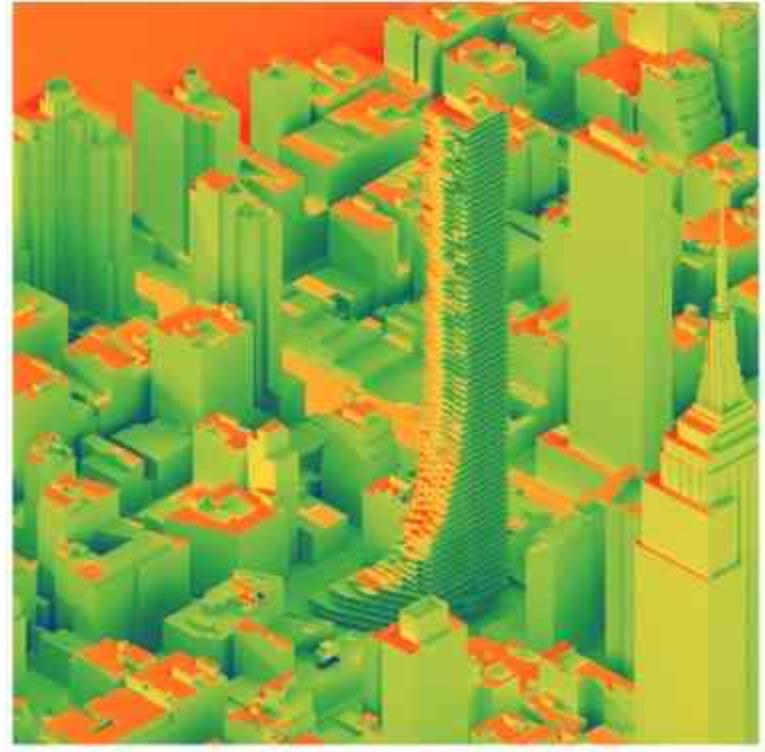
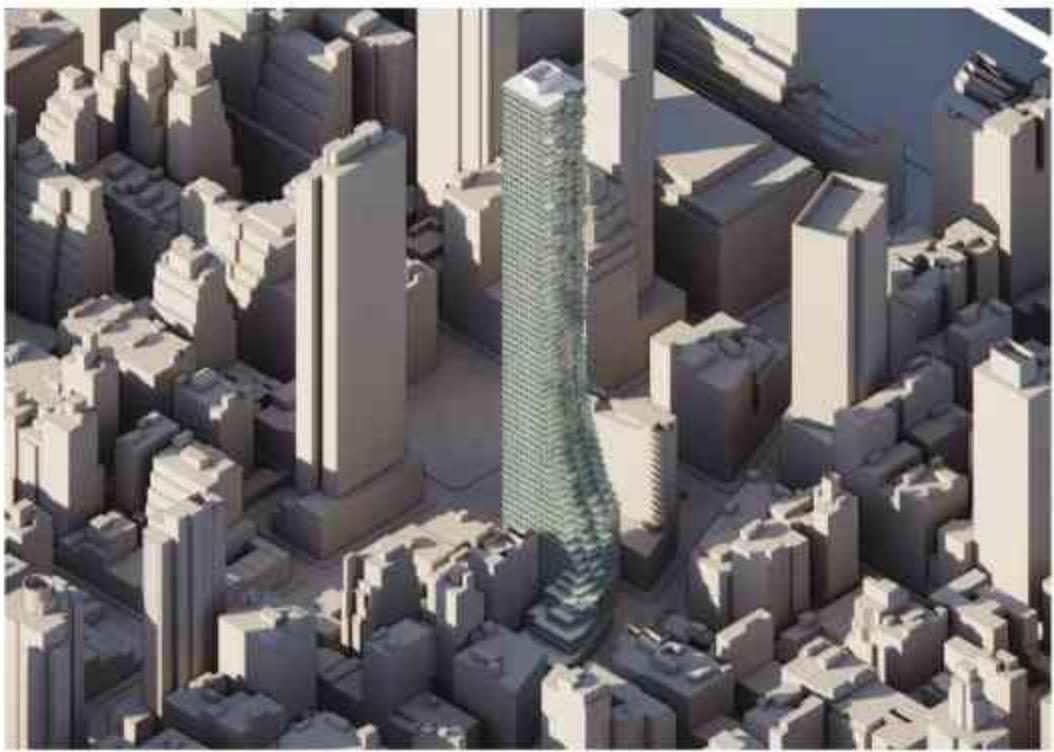


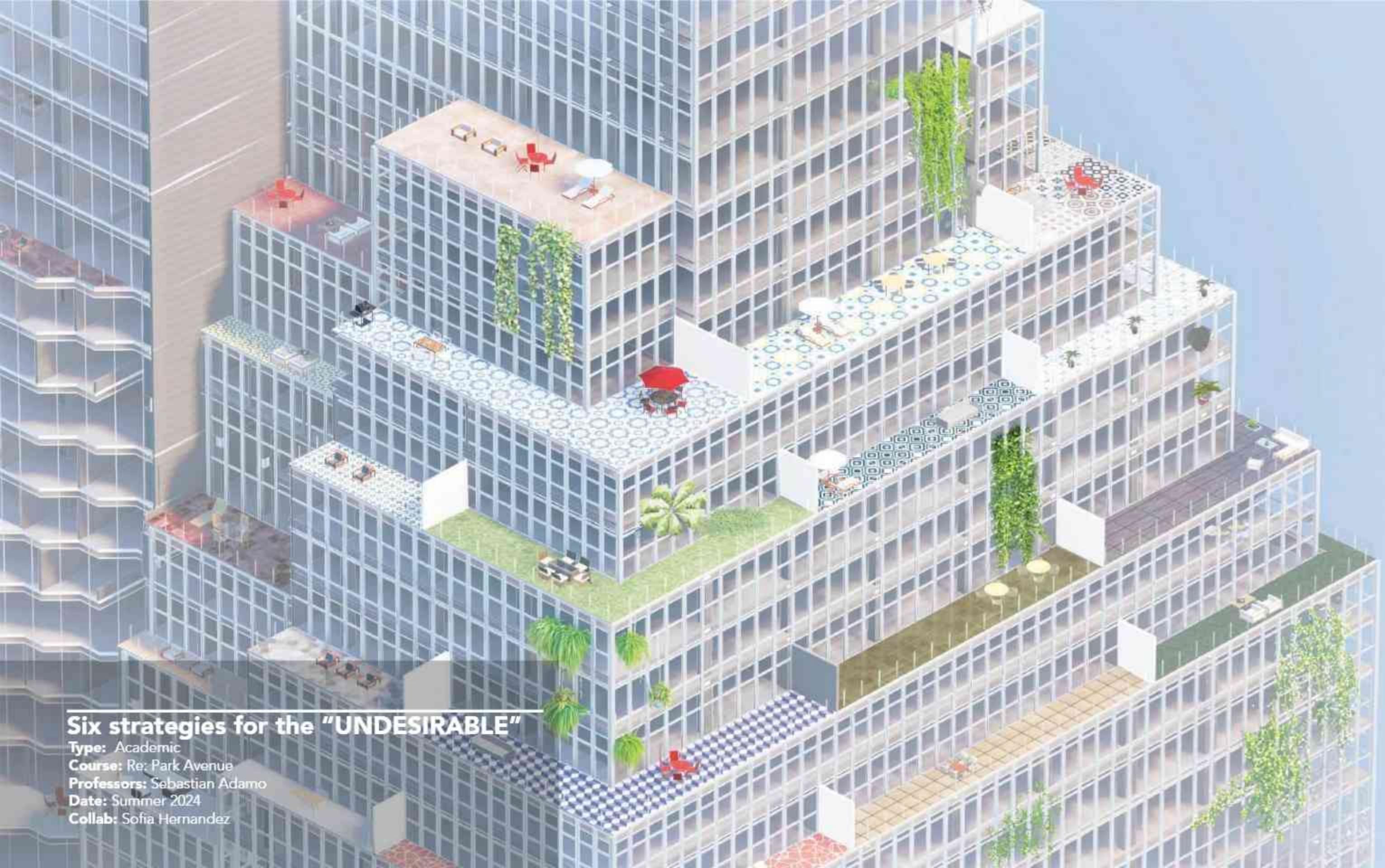
FLOOR PLAN



FACADE DETAIL







Six strategies for the "UNDESIRABLE"

Type: Academic

Course: Re: Park Avenue

Professors: Sebastian Adamo

Date: Summer 2024

Collab: Sofia Hernandez

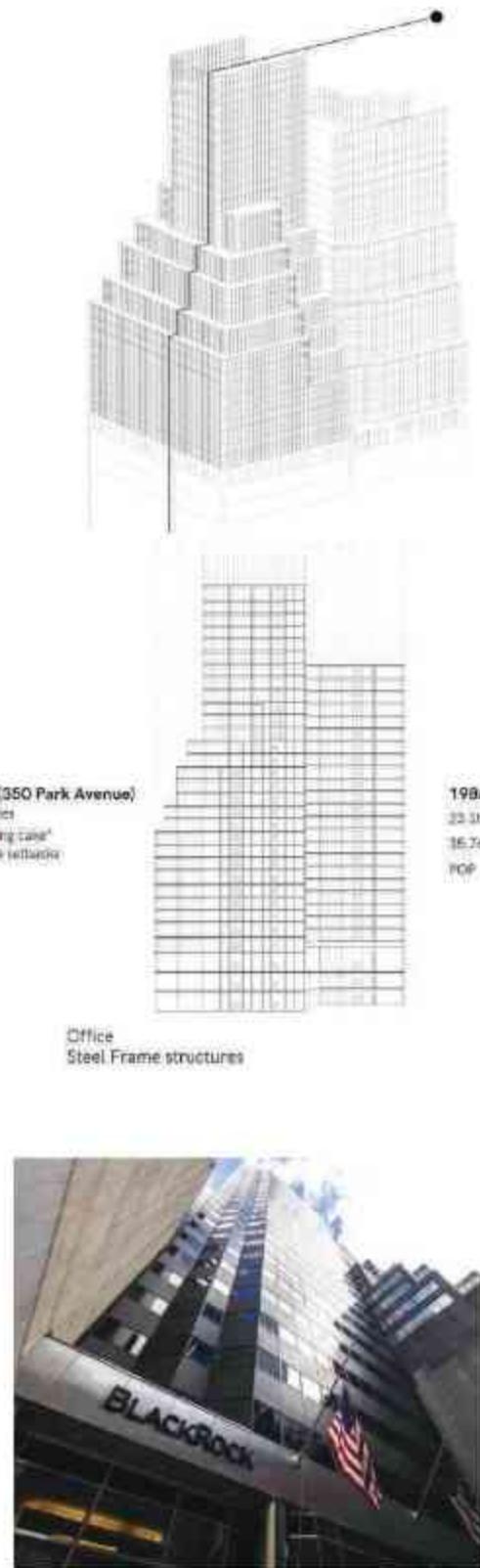
Housing Laboratory

In a context of accelerated urban transformation, New York City faces a paradox: while millions of square feet of office space remain vacant, the demand for new housing continues to rise. Given this reality, the future of 350 Park Avenue and its sister building, the Black Rock Building, is now under debate.

Currently, the plan is to demolish both structures to make way for a new office skyscraper four times taller. However, this proposal explores an alternative that, instead of demolishing to build from scratch, seeks to repurpose and reimagine these buildings through an innovative approach. By implementing six architectural strategies, the goal is to transform the apparent limitations of these towers into opportunities for the creation of diverse and functional housing.

This approach is based on the concept of the ordinary, developed by Yoshiharu Tsukamoto, which encourages observing the city without preconceived judgments about what constitutes "good" or "bad" architecture. Instead of dismissing buildings considered mediocre, the focus is on identifying their spatial and functional potential to redefine their role in the urban fabric. Additionally, inspiration is drawn from the philosophy of Aikido, where existing energy is not opposed but redirected to create a new balance.

Beyond the transformation of 350 Park Avenue and the Black Rock Building, this methodology offers a scalable model that can be applied to other buildings with similar characteristics worldwide. At a time when many cities are simultaneously facing high office vacancy rates and a growing housing crisis, this approach demonstrates that what is seemingly ordinary can become a key resource for urban and social development.

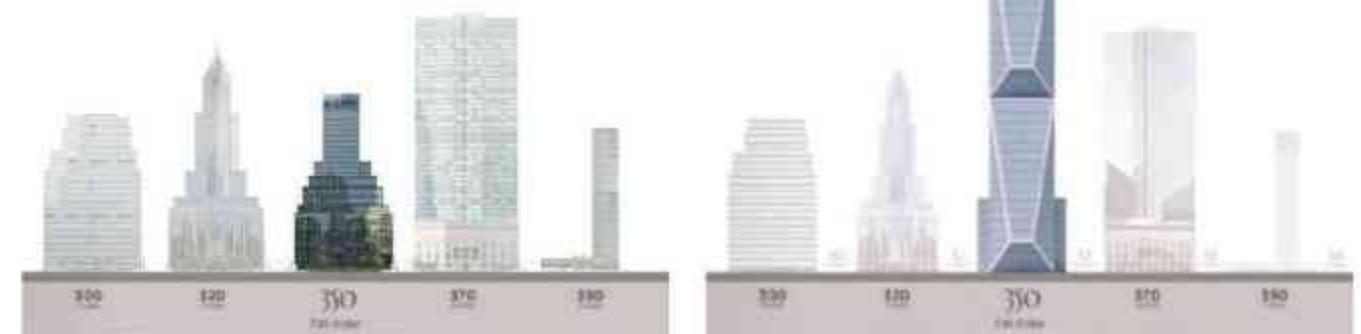


1960 (350 Park Avenue)
32 Stories
"Wedding cake"
Multiple setbacks

Office
Steel Frame structures

1986 (Black Rock Building)
23 Stories
16,745 m²
POP

While current redevelopment plans propose the complete demolition of 350 Park Avenue in favor of a new supertall office tower, this project presents an alternative path —one rooted in adaptive reuse rather than erasure. Instead of contributing to the oversaturation of commercial space, our proposal transforms the existing structure into a housing prototype.

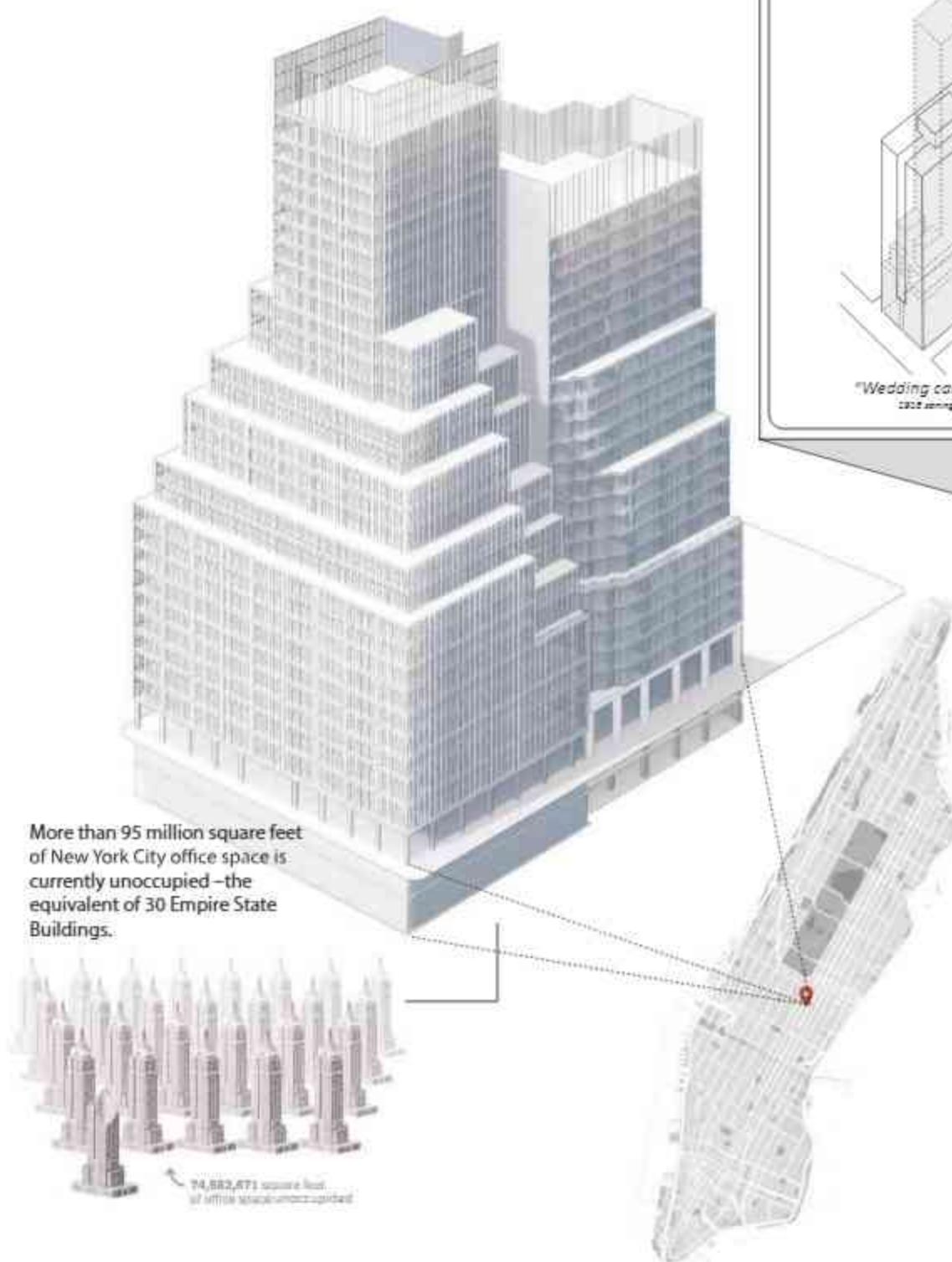


In a rapidly changing urban landscape, cities like New York are facing a paradox: while millions of square feet of office space remain vacant, the demand for new housing continues to rise. This project seeks to address the problem posed by the many old skyscrapers in New York City that are being demolished to make way for new, taller, and more modern buildings, considered outdated and obsolete. Instead of following the typical route of demolition, our approach proposes an adaptive reuse project that aims to repurpose one of these iconic towers—350 Park Avenue—along with its neighbor, the BlackRock Building.

Both buildings, despite being located next to each other, have very different architectural identities. One is criticized for its "wedding cake" style, while the other has been regarded as offering no architectural value. Through this project, we explore how these buildings—often considered undesirable—can actually be transformed and adapted to meet current urban needs, turning what is seen as obsolete into something functional and vital.

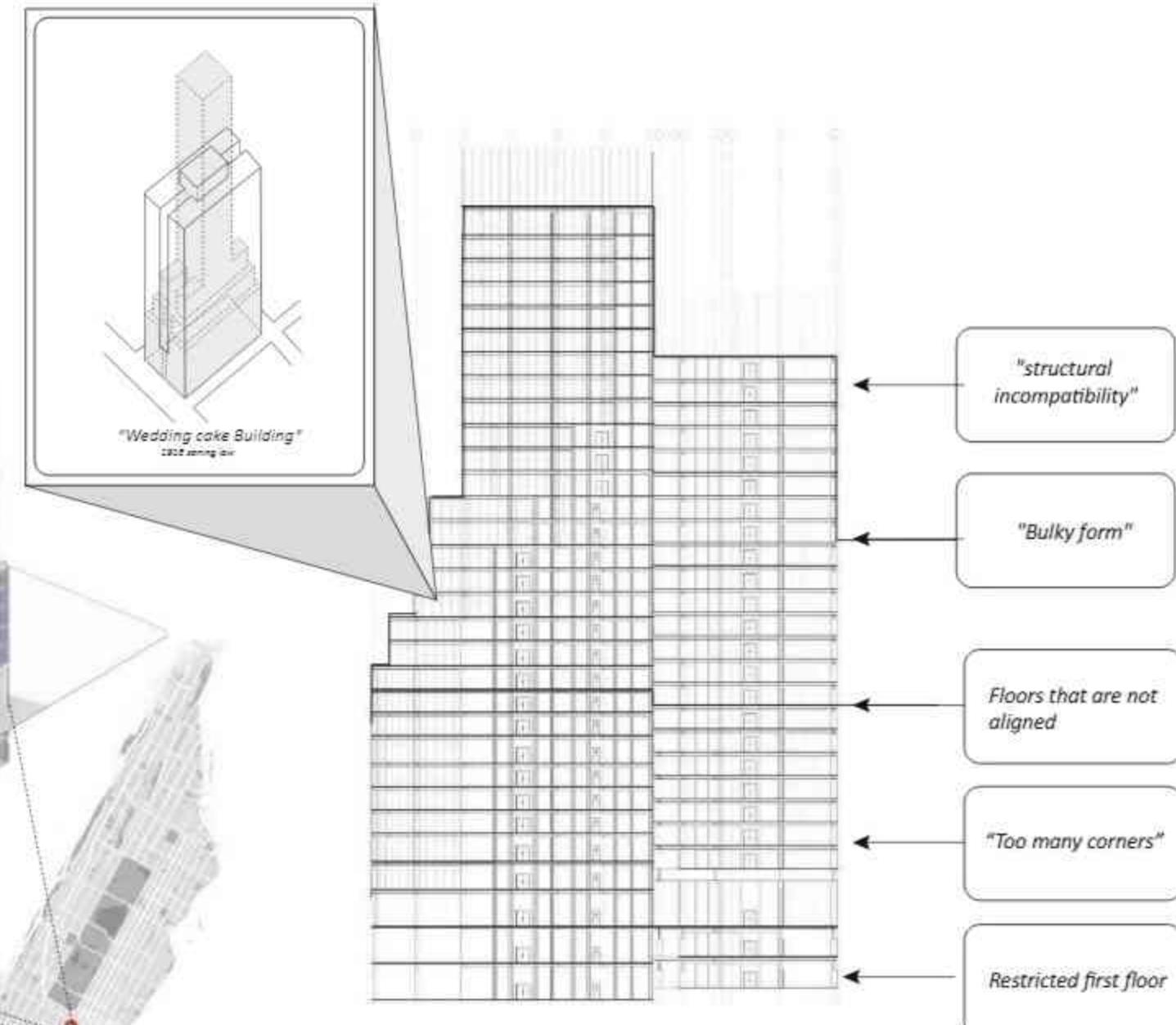
The Six "Unwanted" Conditions of the Office Towers and Their Potential for Housing:

Throughout our research, we identified six key features of the buildings that are typically seen as disadvantages in office spaces but are highly desirable when considered for a housing project. These include misaligned floors, an uninviting first floor, large core areas, setbacks as housing opportunities, irregular floor plans, and deep floor plans. These features, often seen as limiting in the office setting, open up new possibilities when repurposed for residential use.



Anatomy of an "Undesirable" Building

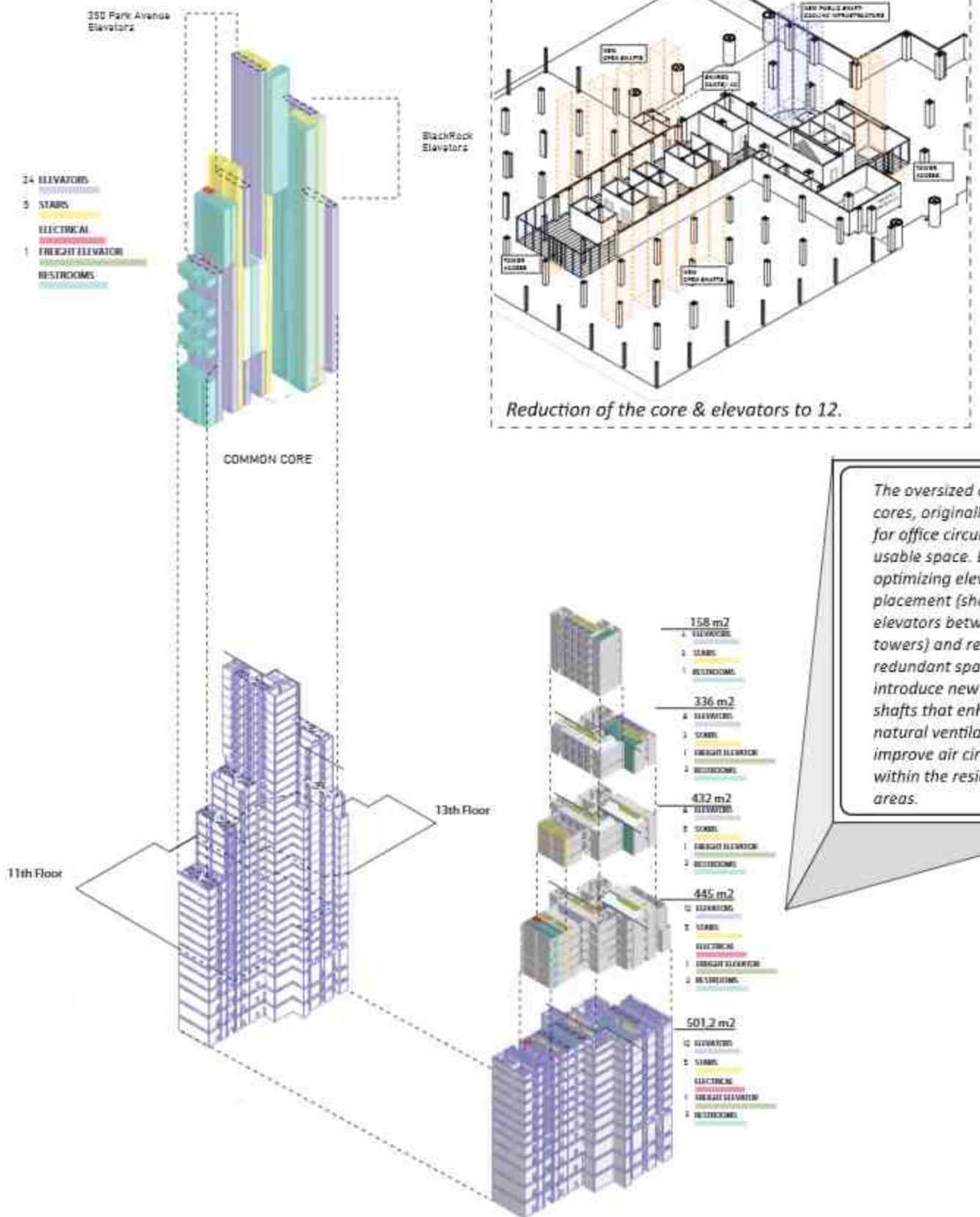
IN NYC

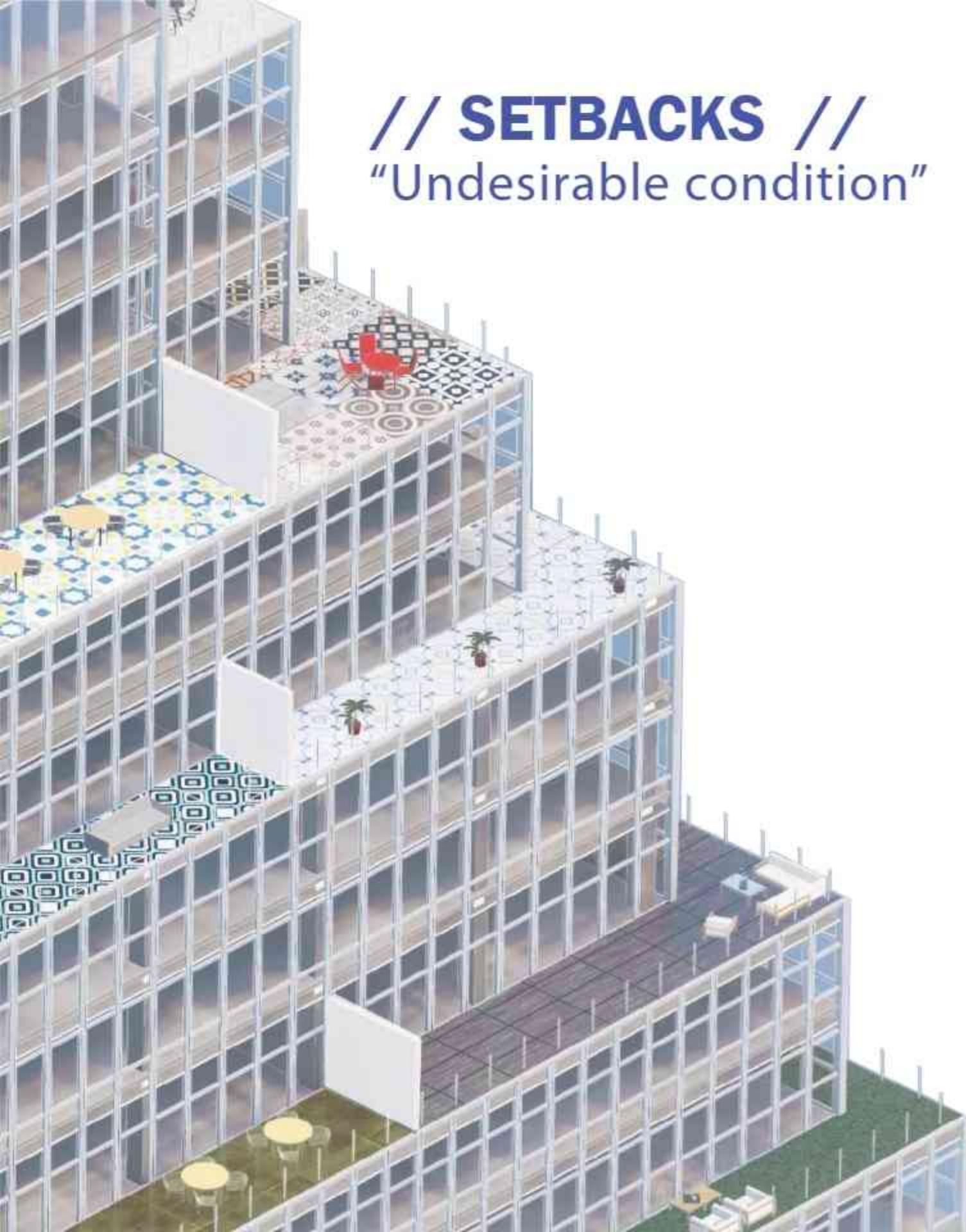


The aesthetic and functional challenges of merging two buildings

// LARGE CORE AREA //

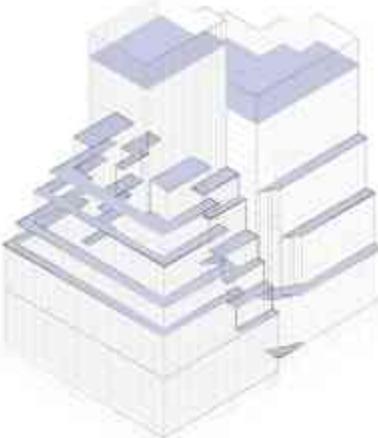
Undesirable condition



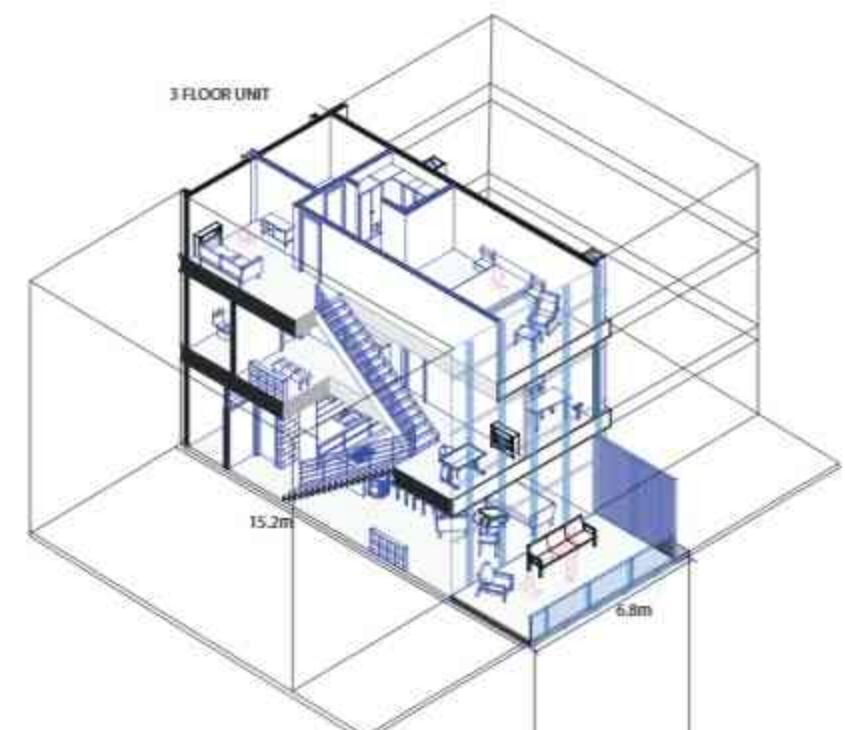


// SETBACKS //

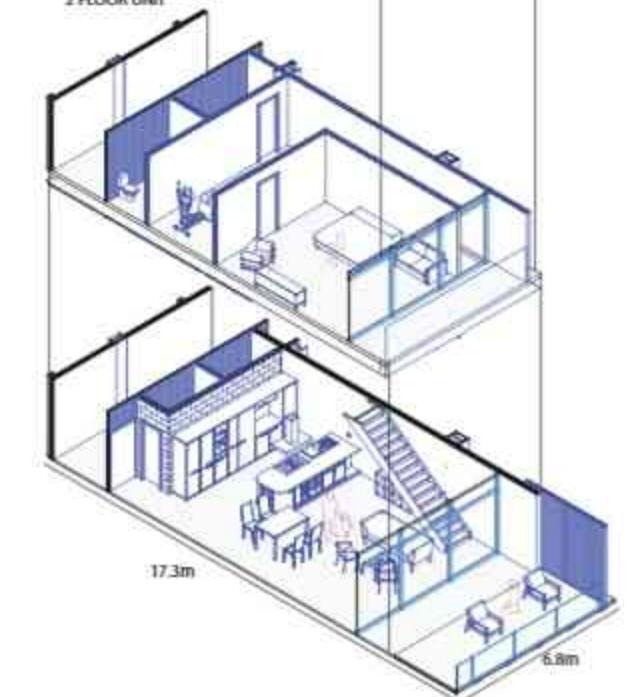
"Undesirable condition"



TOTAL: 25 SETBACKS

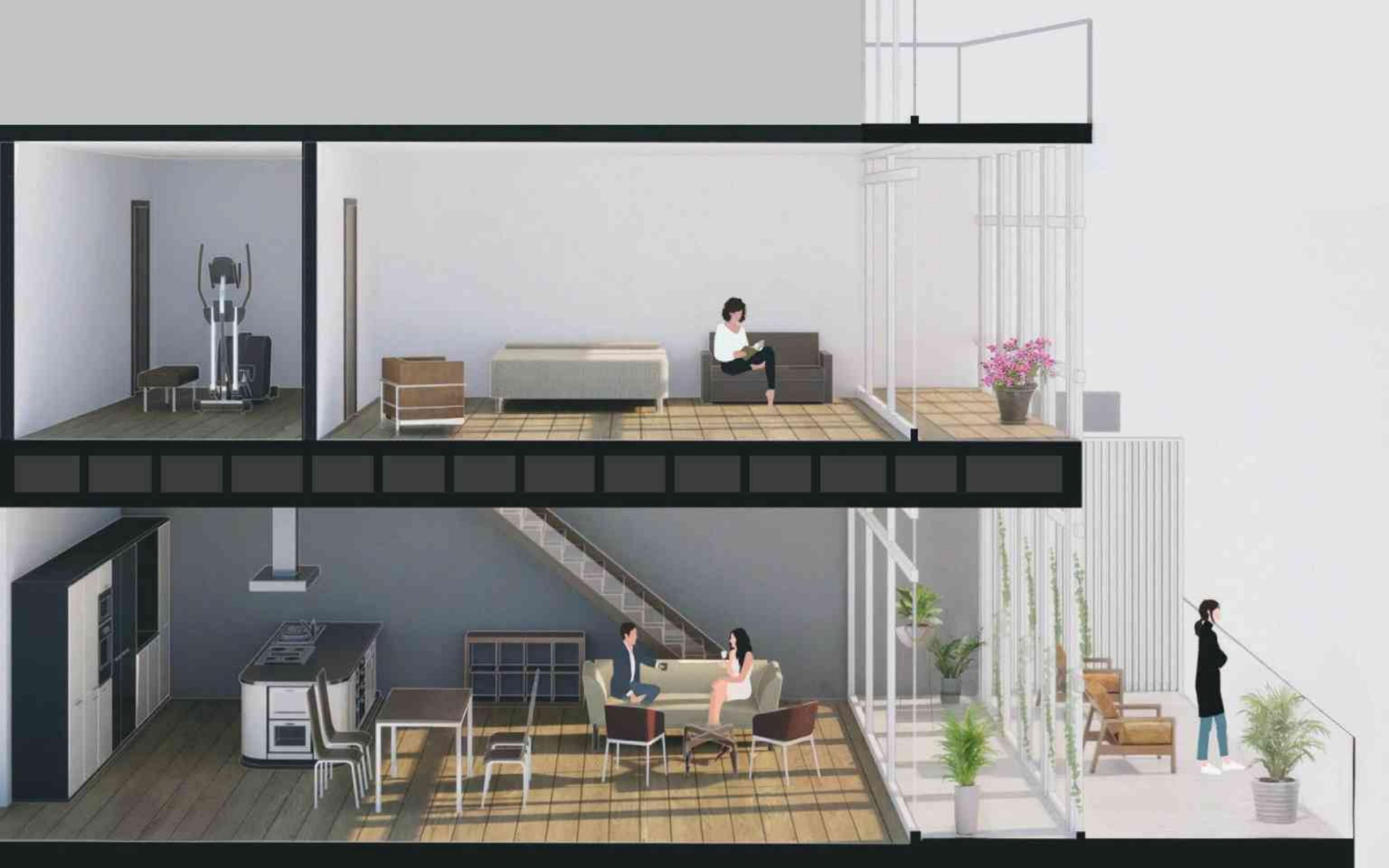


3 FLOOR UNIT



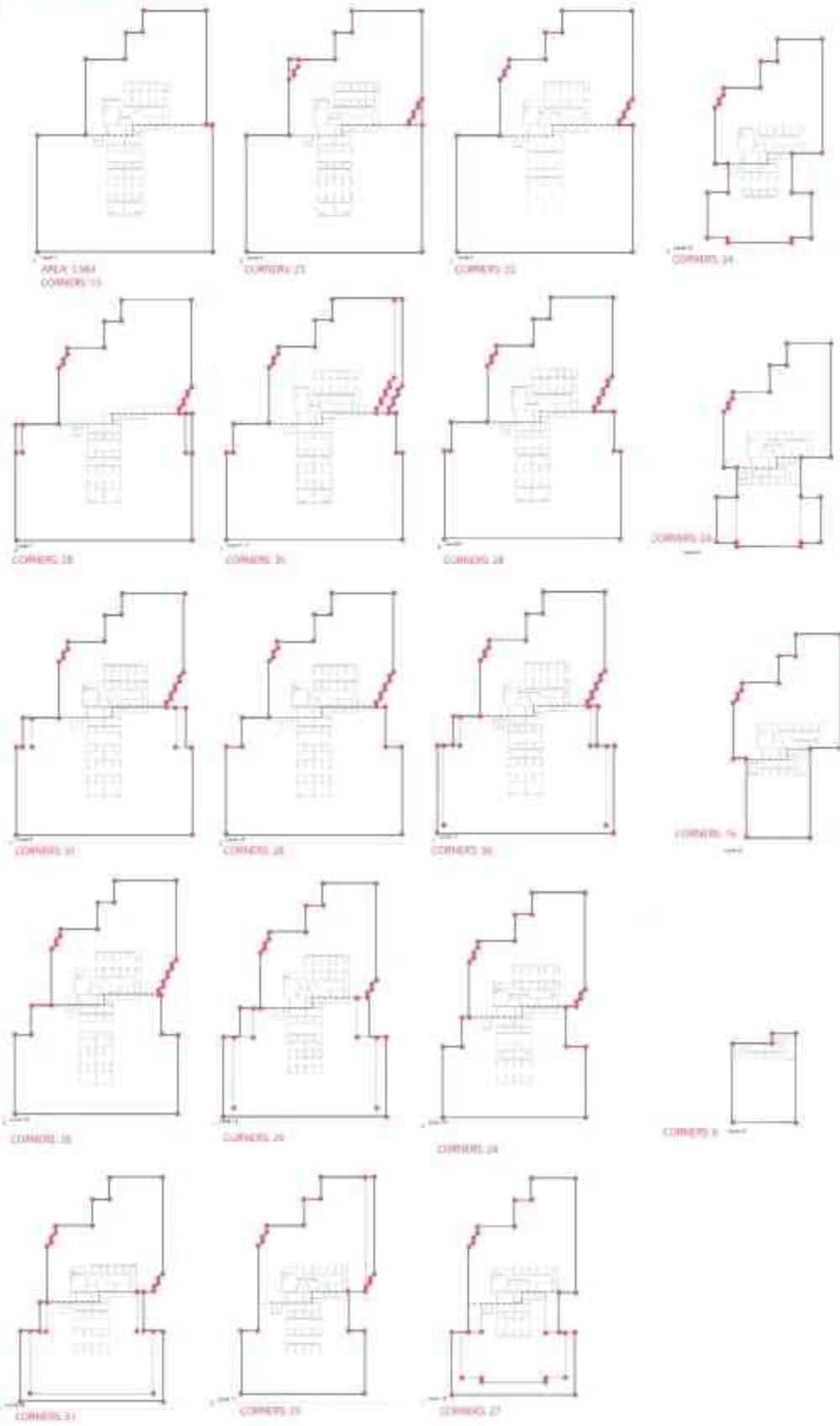
2 FLOOR UNIT

Setbacks as Housing Opportunities
The zoning-required setbacks, which contribute to the outdated "wedding cake" aesthetic, are reimaged as opportunities for new housing typologies. Multi-story residential units with private terraces are integrated into these spaces, creating unique living environments with access to outdoor areas.

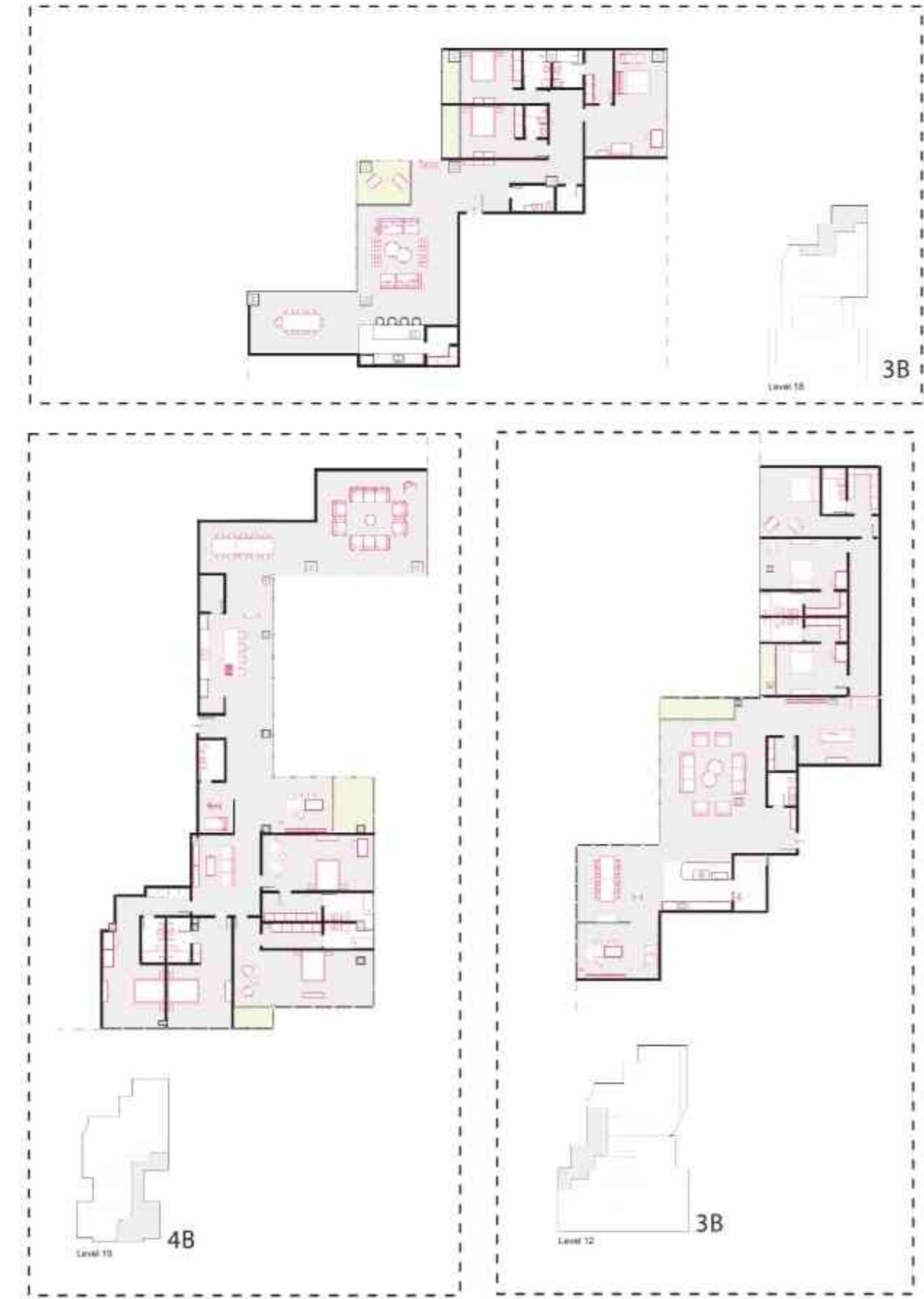


// IRREGULAR FLOOR PLAN //

Undesirable condition



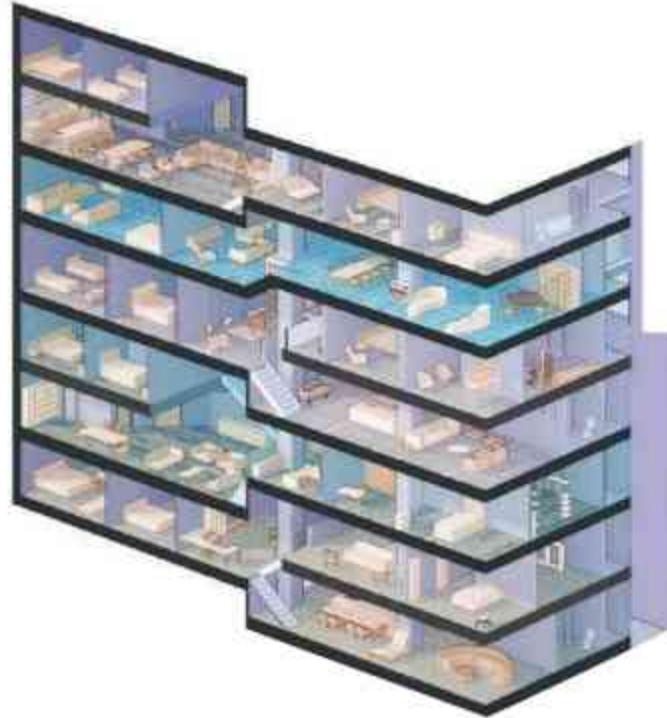
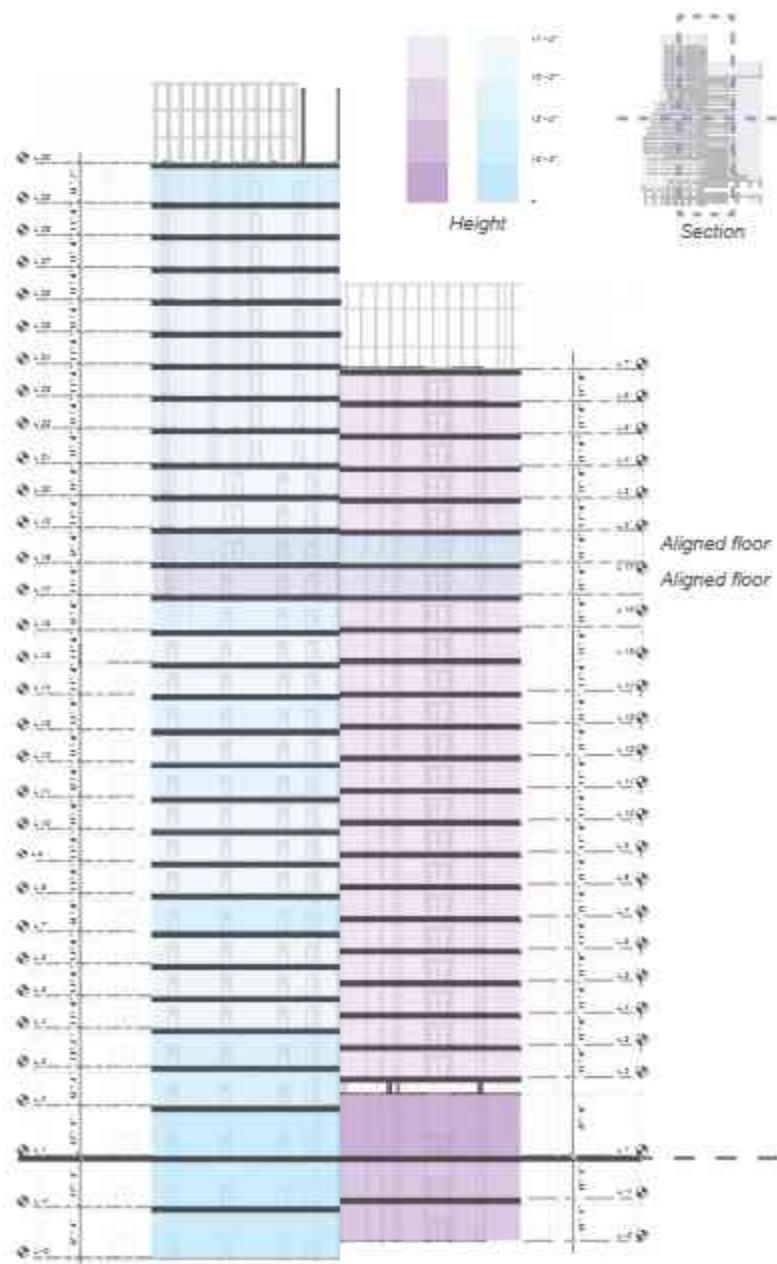
The combination of two buildings results in highly irregular floor layouts, with rare angles and multiple corners which are typically undesirable for office use. However, in housing, these irregularities become an asset, allowing for unique apartments with multiple corners, diverse spatial qualities, and expansive views.



// MISALIGNED FLOORS //

Undesirable condition

350 Park Avenue | Blackrock Building



Differences in floor levels complicate internal circulation, a drawback for office buildings. By embracing these variations, a new residential typology is introduced, incorporating multi-level lofts with dynamic spatial relationships and varied ceiling heights.

// UNINVITING FIRST FLOOR //

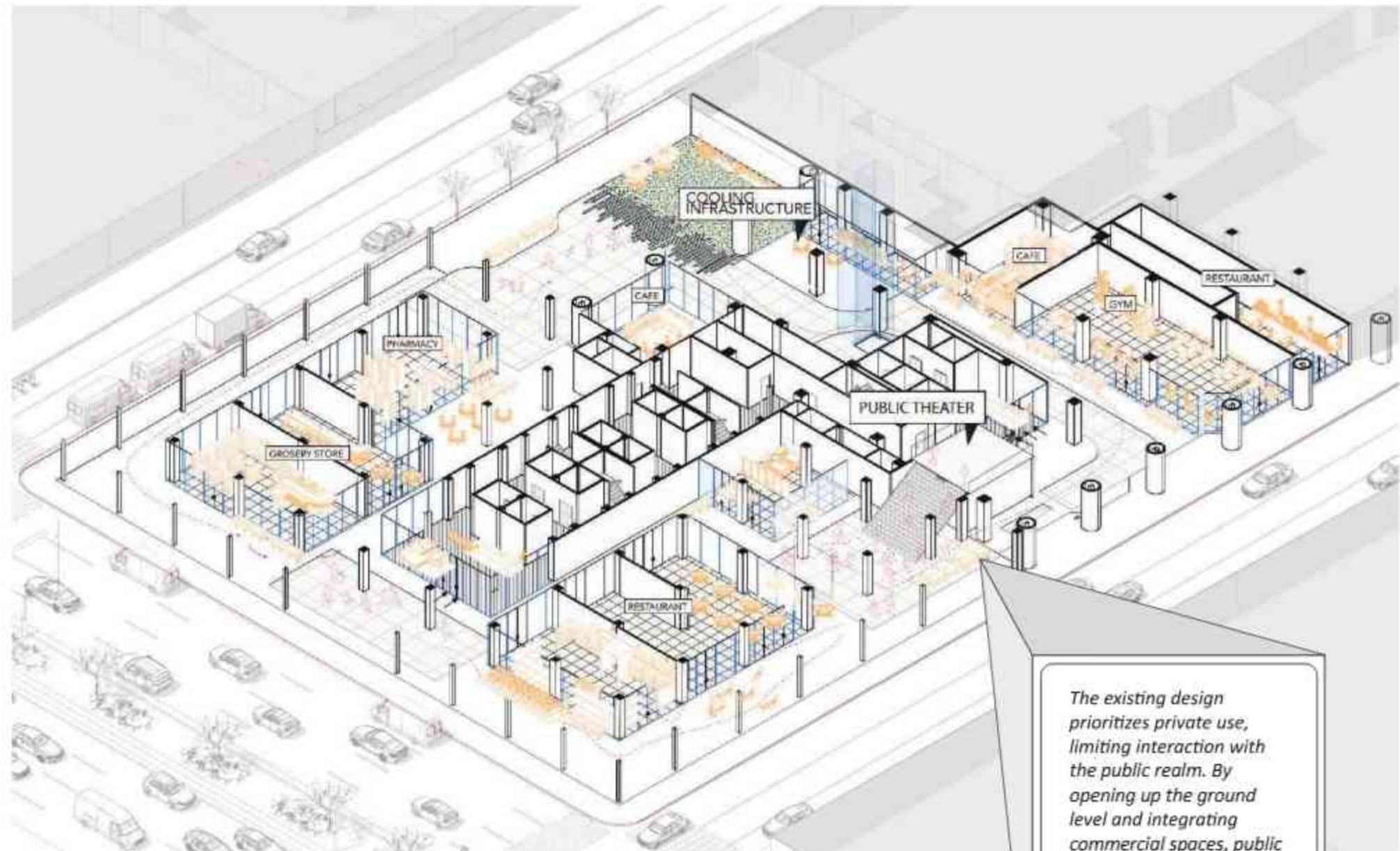
Undesirable condition



Actual floorplan



POP Space

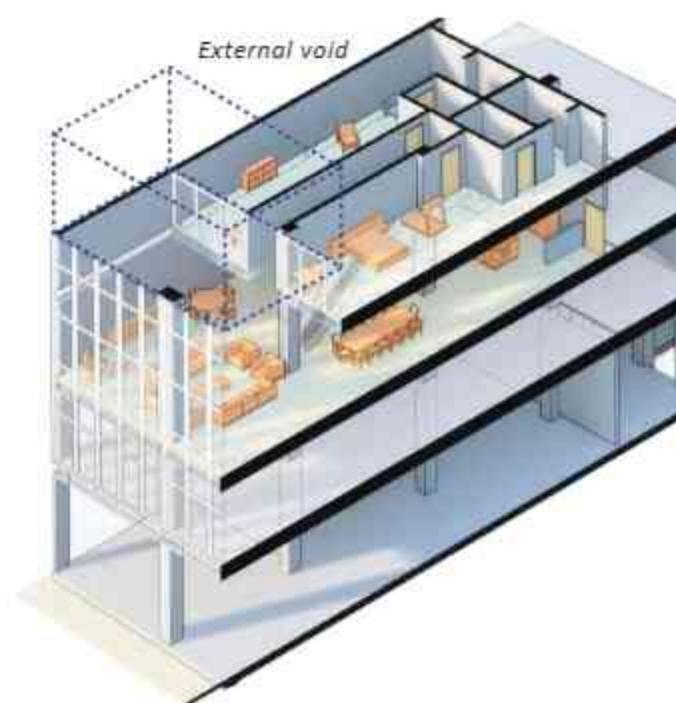
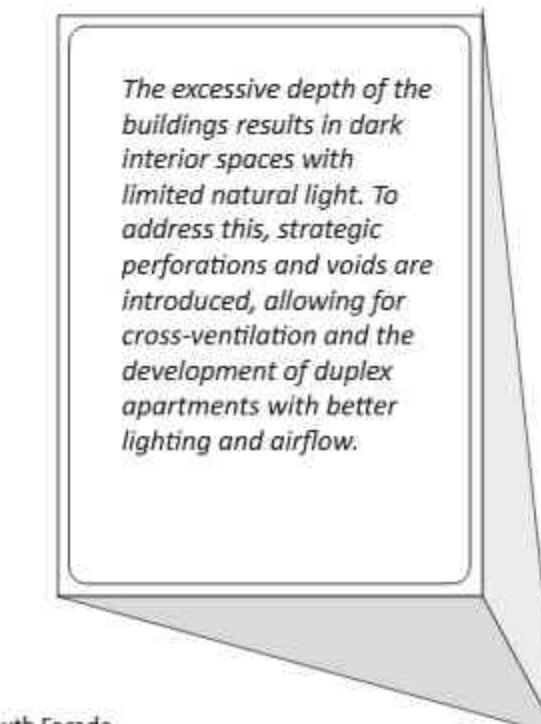
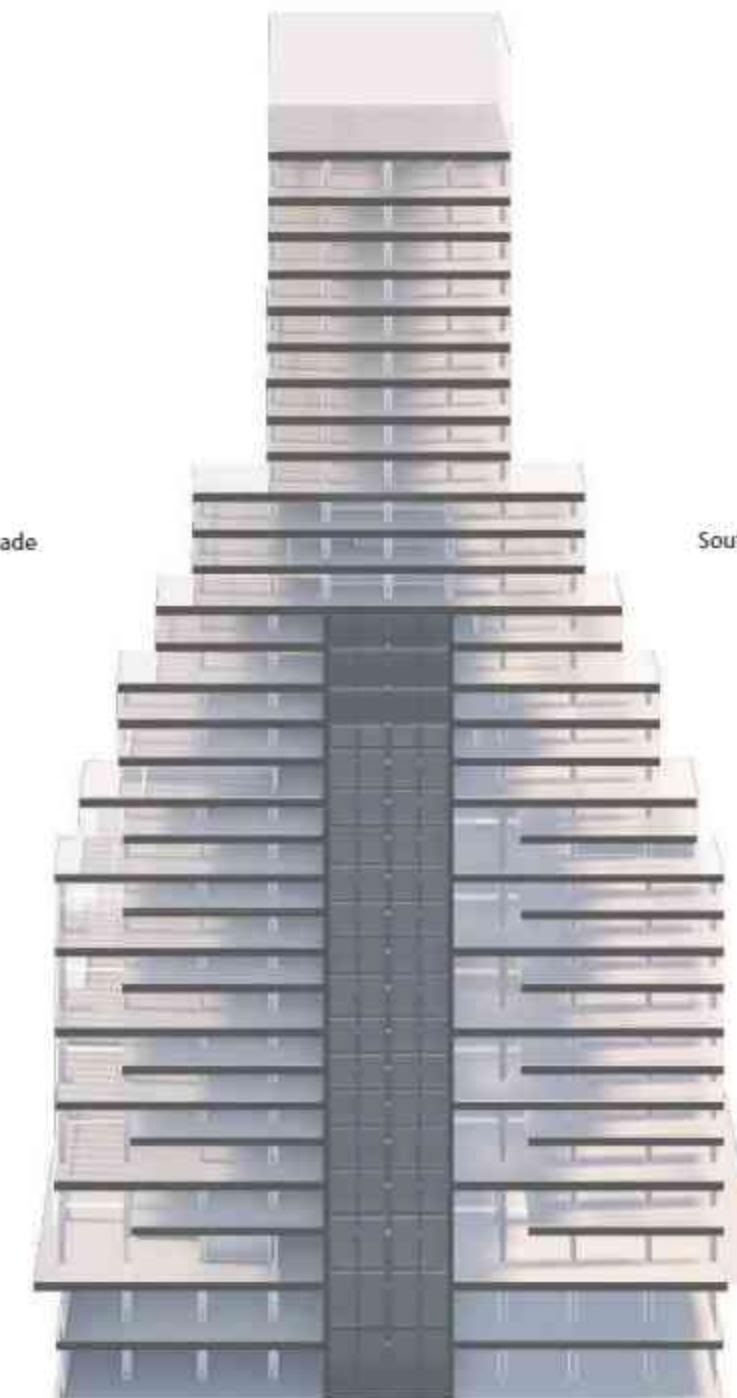


The POP activates the ground level, allowing public life to permeate the privately owned space and fostering a more porous and engaging urban interface

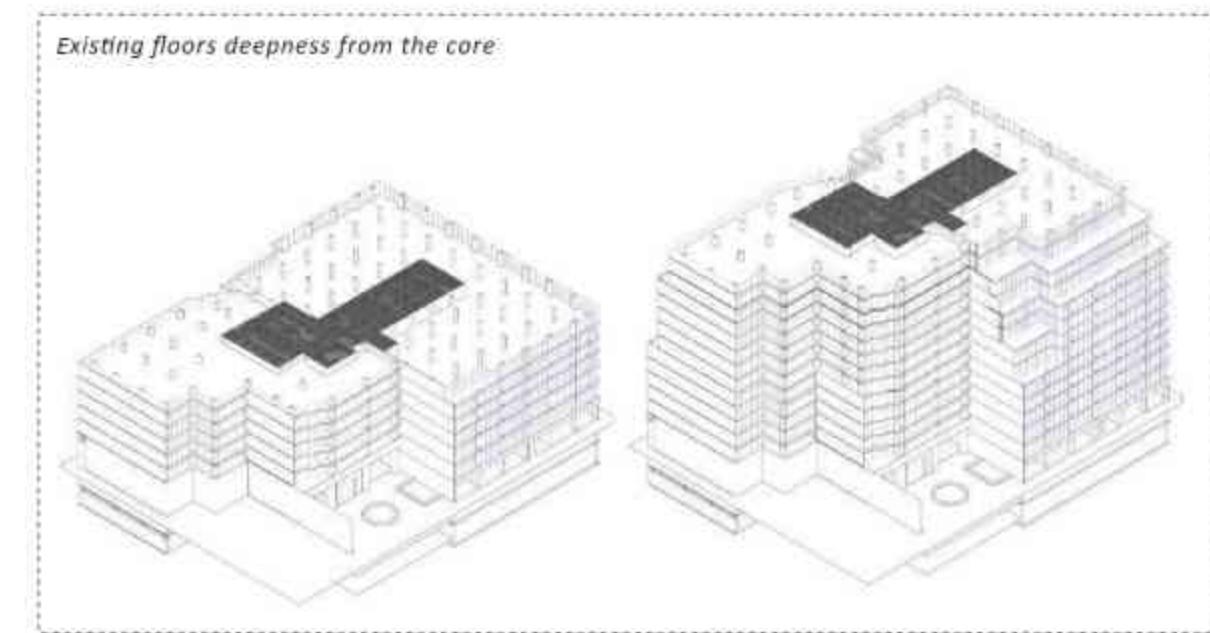
The existing design prioritizes private use, limiting interaction with the public realm. By opening up the ground level and integrating commercial spaces, public seating areas, and a cooling infrastructure, we can transform the street-level experience into a vibrant, engaging urban space..

// DEEP FLOOR PLANS //

Undesirable condition



Inner and Outer perforations of the tower based on the orientation to allow more light in.



Instead of viewing 350 Park Avenue and the BlackRock Building as obsolete structures that should be demolished, this proposal reimagines them as opportunities for innovation. By embracing their irregularities, misalignments, and structural constraints, these buildings can be transformed into a model for adaptive reuse that not only addresses New York's urgent housing needs but also redefines how cities approach architectural preservation and sustainability.

This project is not just about saving two buildings; it's about shifting perspectives. Instead of demolishing the past to make way for the new, why not use what already exists to build a more inclusive, dynamic, and responsive urban environment? The six strategies outlined here show that even the most "ordinary" buildings can hold extraordinary potential. However, this project does not aim to provide a final design for a single building; rather, it proposes a series of replicable strategies that can be applied in New York and beyond. It aspires to serve as a manual for transforming obsolete towers and unlocking their full potential, offering a framework for adaptive reuse that can be applied in a variety of urban contexts worldwide.



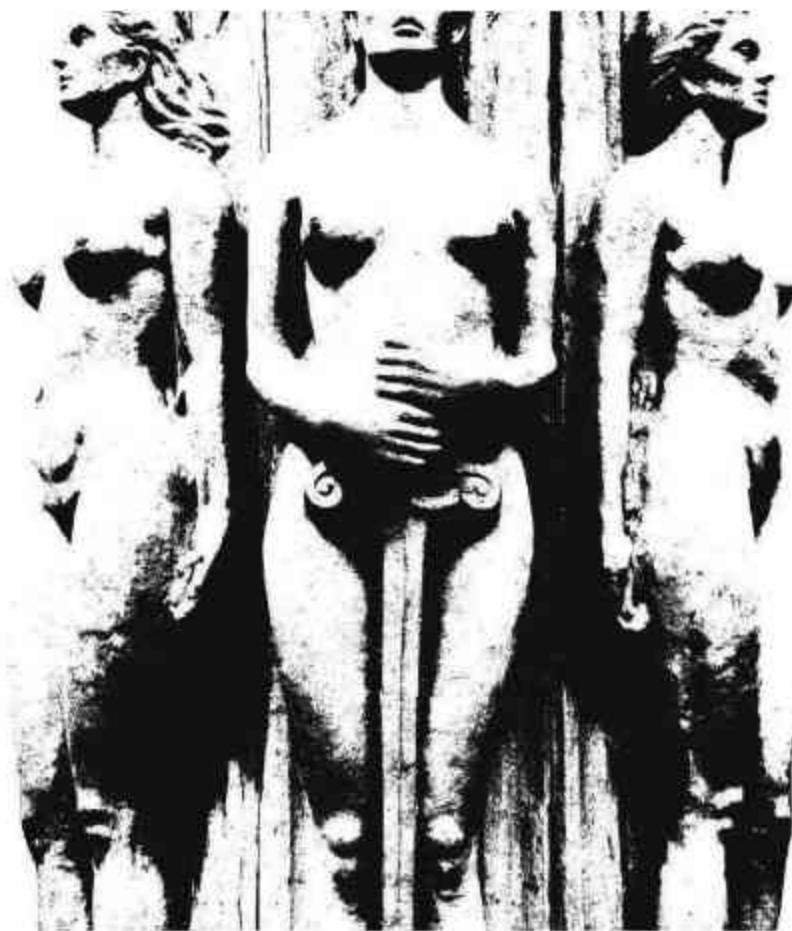
Antimonument

Type: Academic
Course: Robot Lab
Professors: Claudio Rossi - Daniela Atencio
Date: Spring 2021
Collab: Sofia Hernandez

This project commences by examining the "Monument to the Flags" situated in Bogotá, Colombia, delving into its historical and social significance. Through our investigation, we delved into its extensive background, revealing the Monument to the Flags not merely as a static structure but as a dynamic canvas reflecting societal expressions of recent protests in Bogotá—capturing dissatisfactions, needs, and manifestations. Embraced by feminist groups, it transforms into a consecrated space adorned with faces veiled in black paint and bodies tattooed with graffiti by discontented crowds. This metamorphosis turns the monument into a dynamic archive, encapsulating the collective desires and struggles of the community, imprinting its physical form with a compelling narrative of change and dissent.

Our project seeks to reinterpret the social and cultural value of the Monument to the Flags and project it into what we term a new "Antimonument."

The design process of the new "Antimonument" unfolds through iterations involving the subtraction and addition of matter and elements derived from the original reference, centered on a cube. Geometrically, we deconstruct, merge, and juxtapose the most prominent elements of our original reference—Greek architecture present in column carvings, ornamental organic geometry, and the symbolic bodies of women representing justice and femininity. Subsequently, a robotic carving process transforms this new "digital" cube, eliminating the original elements in a literal form but preserving them symbolically.



Muses in negative photographs.



Detail of column type.

3D models of the main elements of the monument.



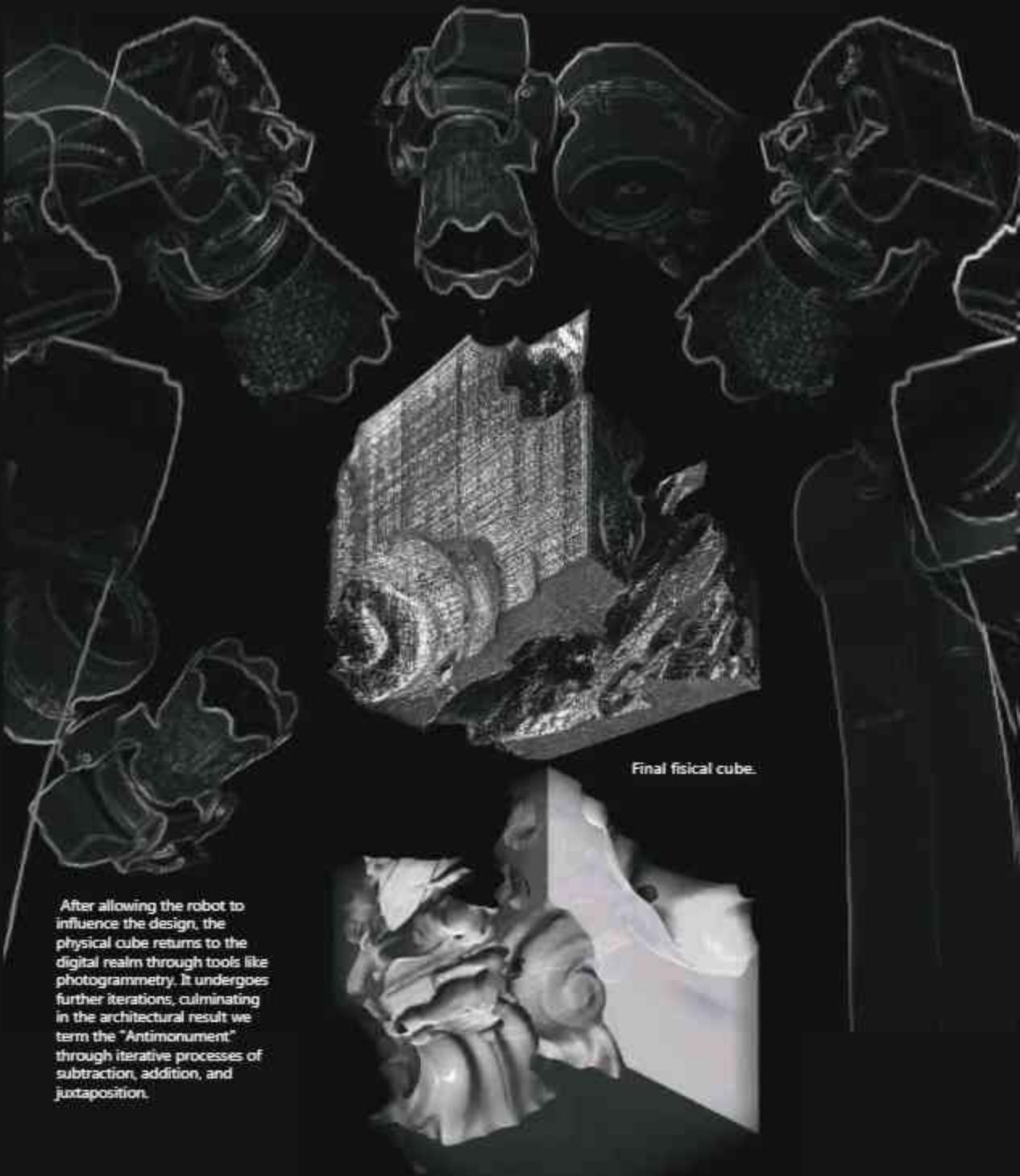
Iterations of subtraction and addition from the cube.

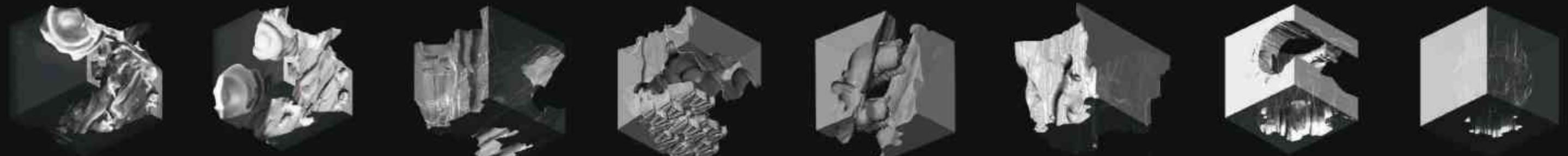


After allowing the robot to influence the design, the physical cube returns to the digital realm through tools like photogrammetry. It undergoes further iterations, culminating in the architectural result we term the "Antimonument" through iterative processes of subtraction, addition, and juxtaposition.

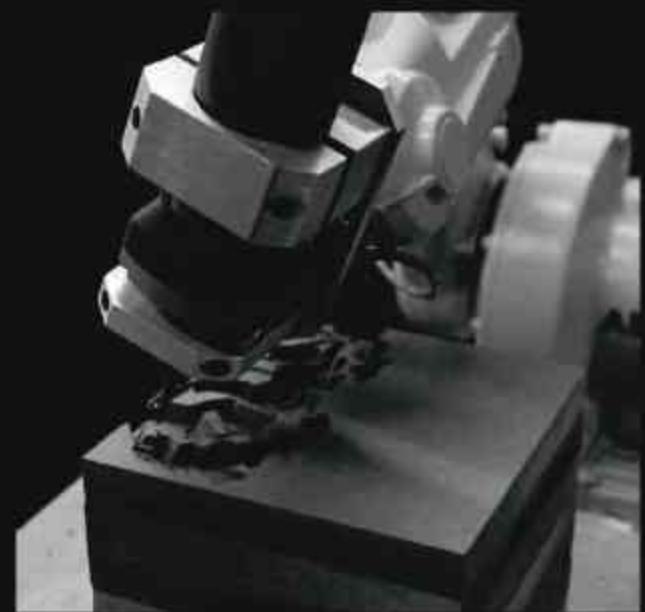
Final fisical cube.

Final digital cube.





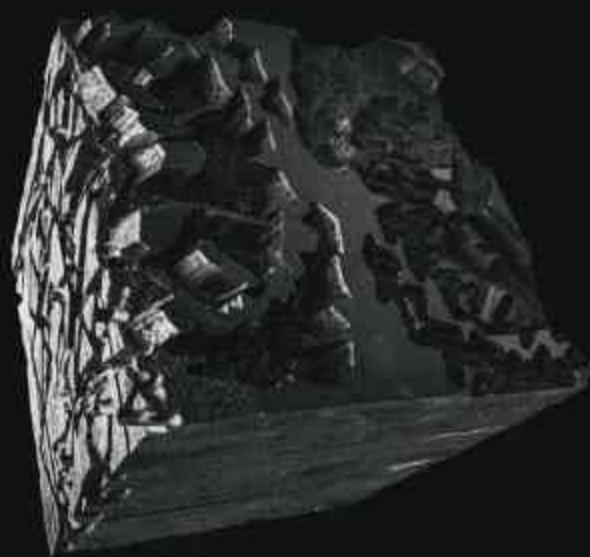
Iterations of transformed cubes.



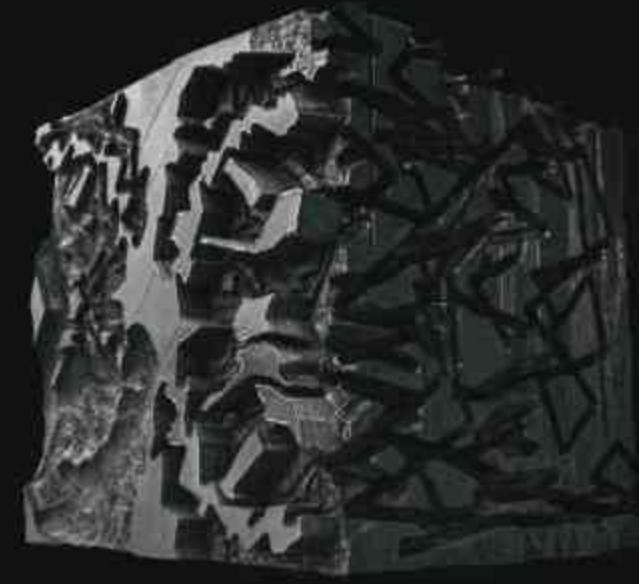
Robot carving the physical wooden cube.



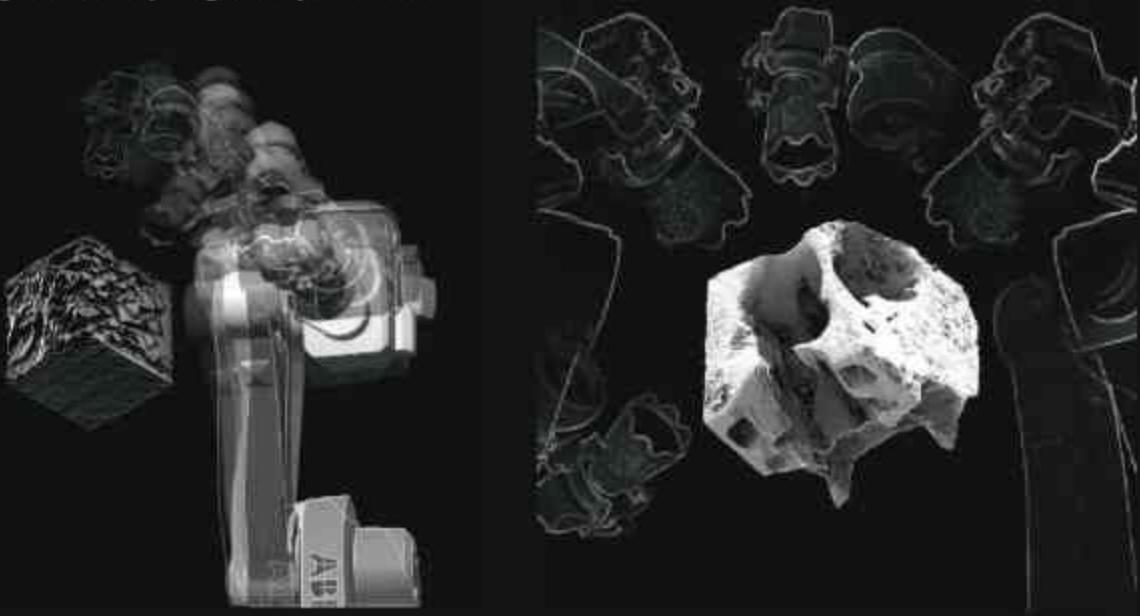
Robotic Toolpath iteration.



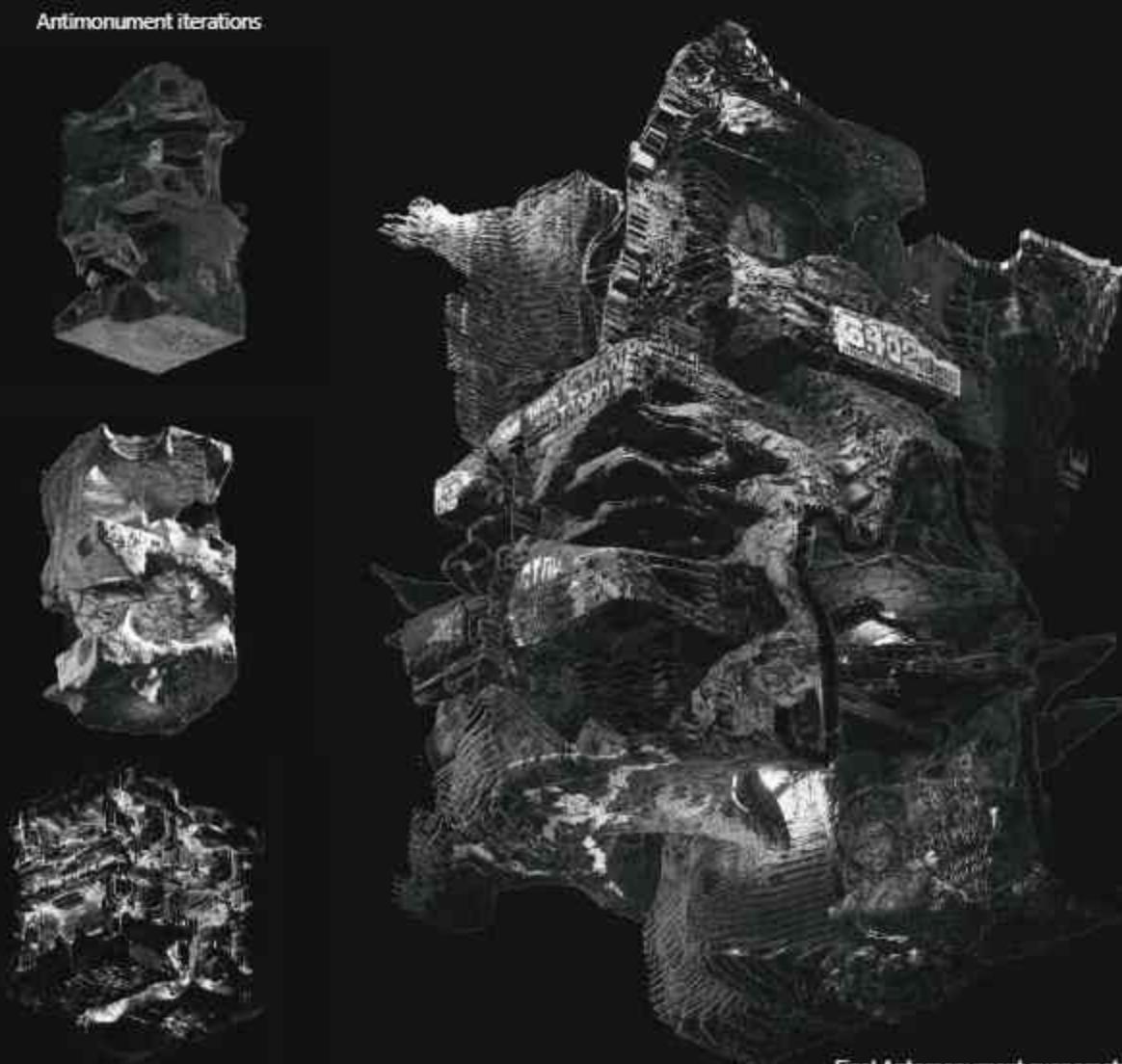
Second physical cube, translated by the robot.



Digital translation photogrammetry of final cubes.

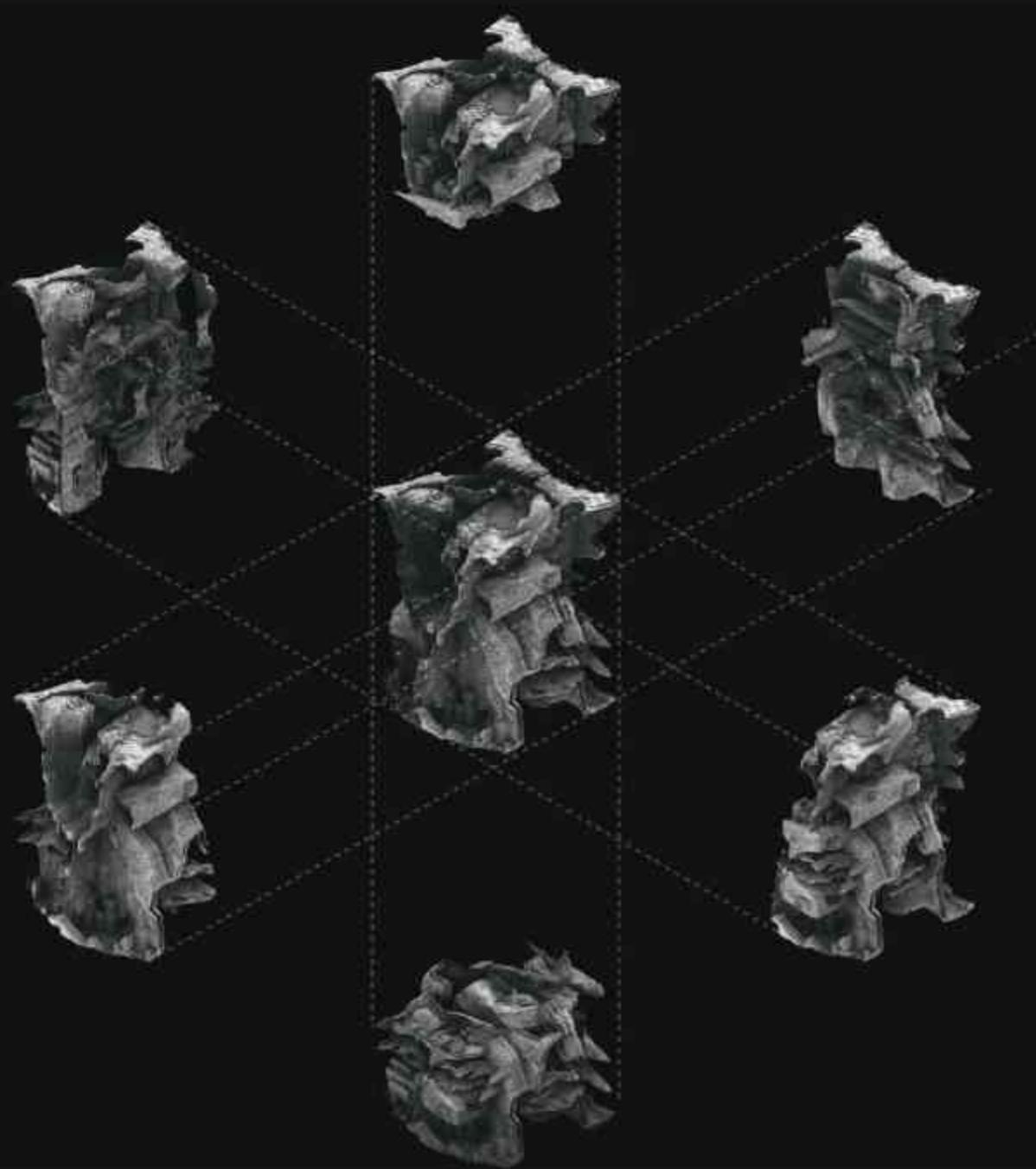


Antimonument iterations

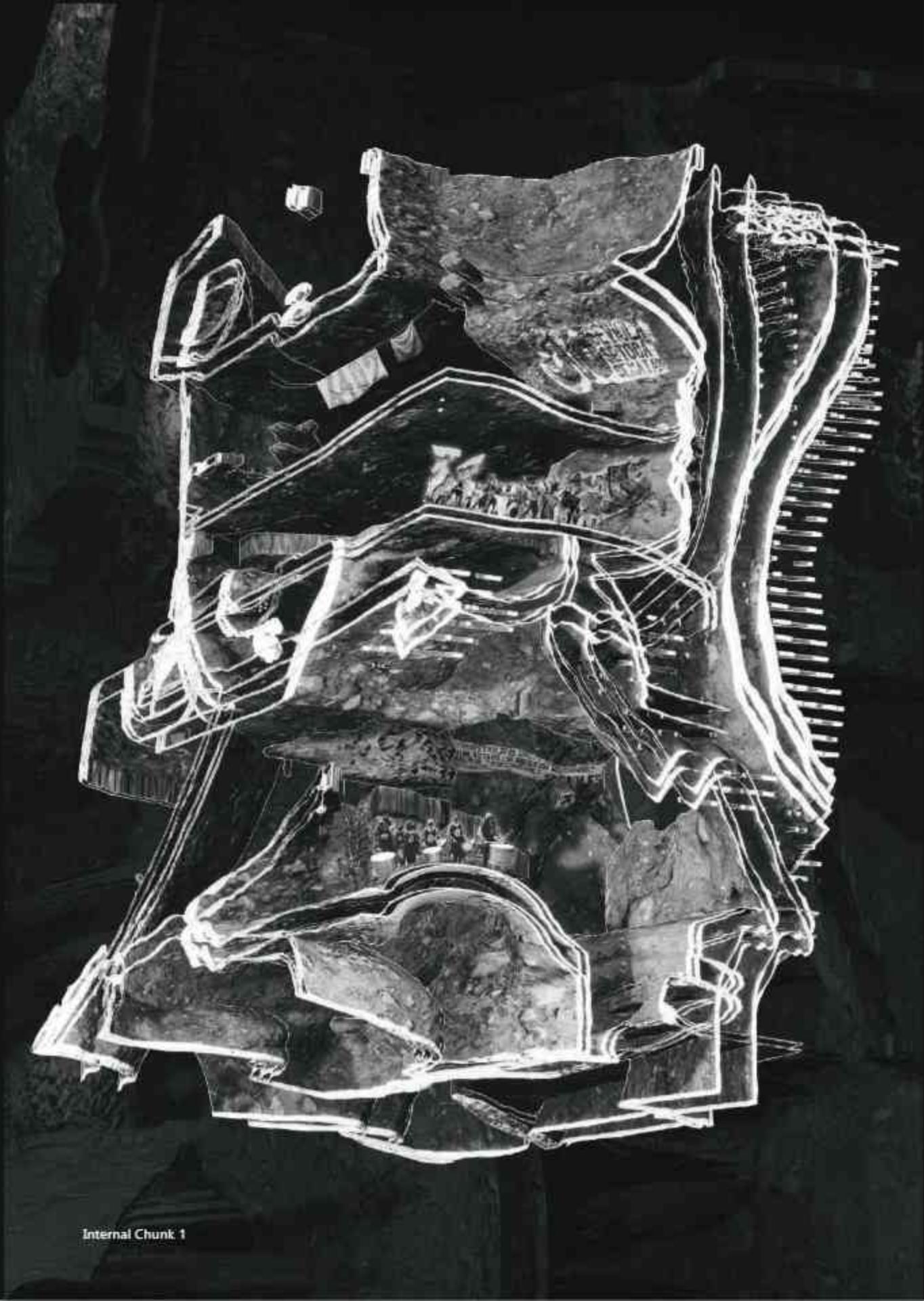


Final Antimonument axonometric view

The final architectural and speculative proposal is a "cave" intended to bear witness to time and history. It stands as a rock where the ideals, dissatisfactions, needs, and identity of today's society are etched into the future. It evolves as an archaeological ruin collectively constructed across generations through various artistic expressions. Conceived as a ruin shaped by socio-cultural manifestations and the passage of time, it exhibits signs of use, deterioration, and natural aging like humidity, dirt, and rust. The Antimonument is envisioned as the cave of the future, currently adorned with graffiti resembling contemporary petroglyphs. It consists of "historical" sediments accumulating and overlapping like geological layers—a stratification, an archive where each layer preserves the memories and wounds of a specific time and society.



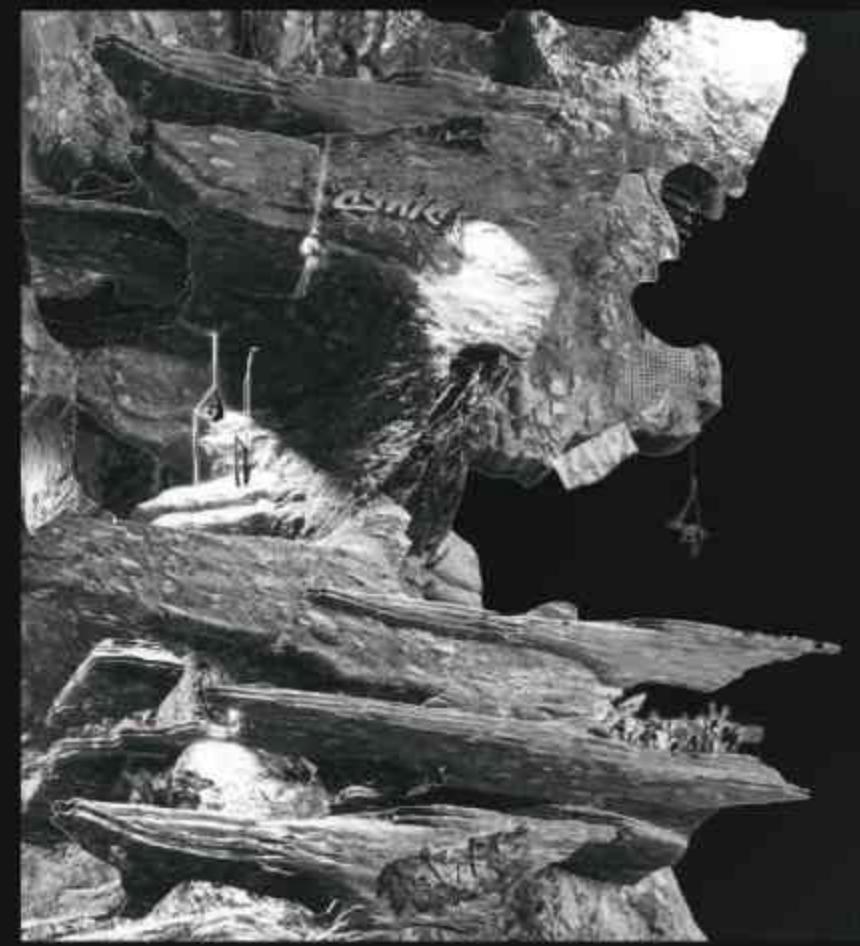
Exploded axonometry



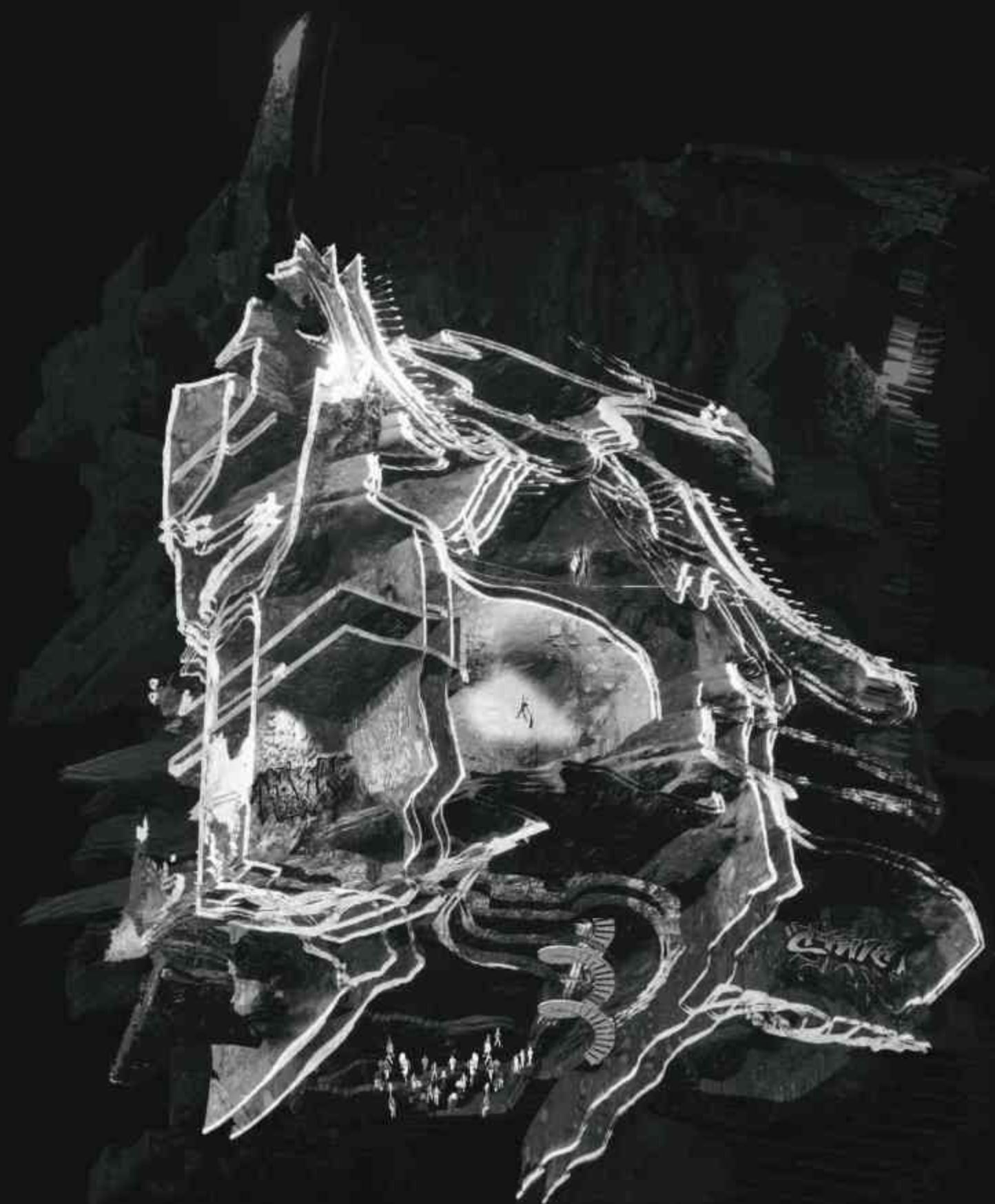
Internal Chunk 1



Zoom 1



Zoom 2



Modern architectural practice in Latin America has faced the crossroads of preserving history and aesthetics from past times while embracing the constant evolution of cultural and social narratives. The "Antimonument" stands as an active medium to bear witness not only to the past but also to the present and future of Latin American society. By revitalizing both the physical appearance and symbolic meaning of the Monumento a las Banderas, this project becomes a dynamic reflection of current cultural and social reinterpretations.

The conception of an architecture in constant evolution, synchronized with the unfolding of humanity, represents an innovative perspective that challenges the convention of static structures intended to endure unchanged. By exploring the idea of dynamic and adaptable buildings, a reinterpretation of the purpose of constructed spaces is proposed, recognizing that societies and their needs evolve over time. This approach suggests that architecture should not only reflect the present but also anticipate and embrace the changing cultural and social narratives of the future. By incorporating flexibility and adaptability in design, a deeper connection is established between the built environment and the constantly transforming identity of communities. Thus, a new era is inaugurated in which architecture not only endures but evolves in harmony with the ever-changing dynamics of humanity over time.



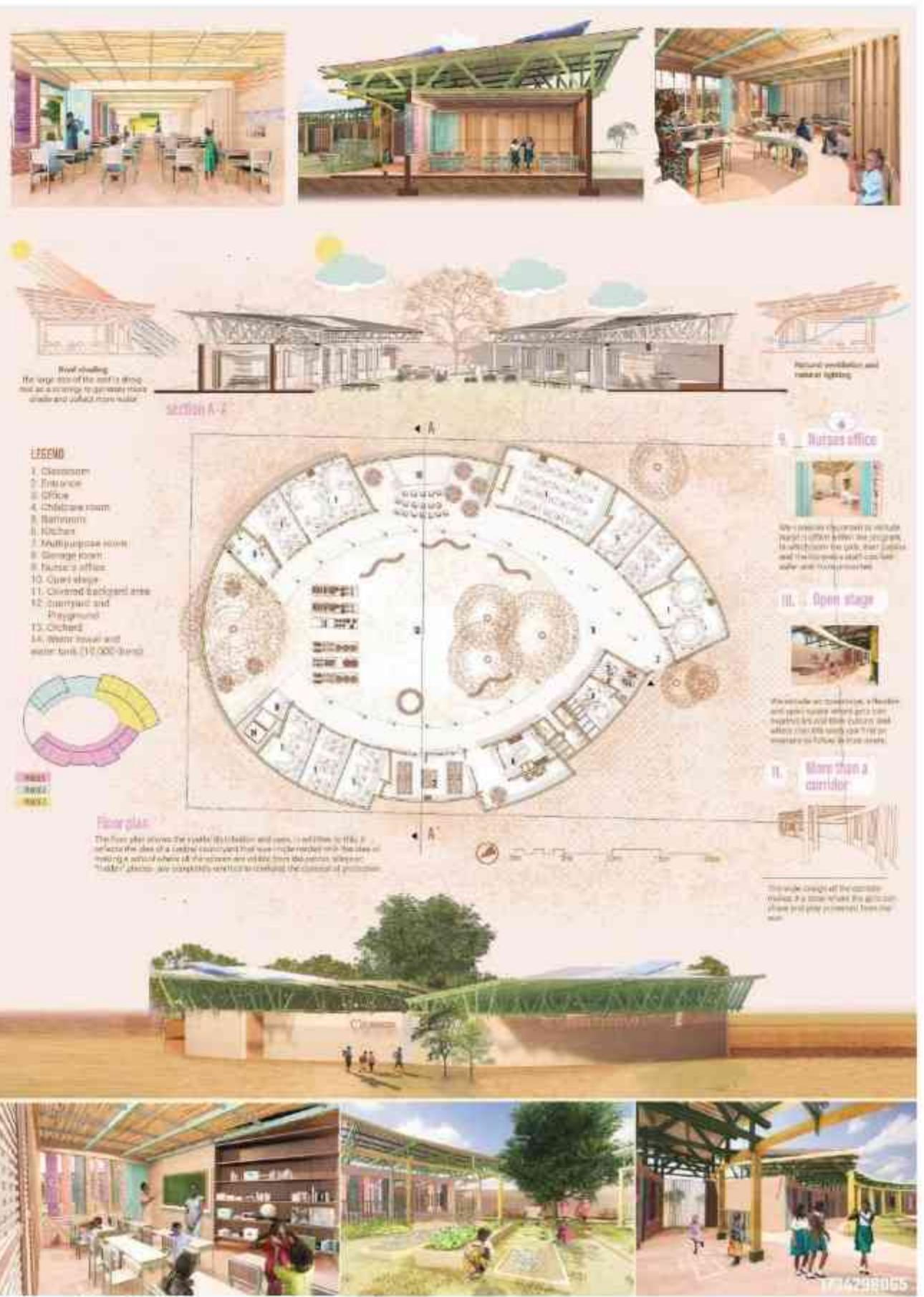
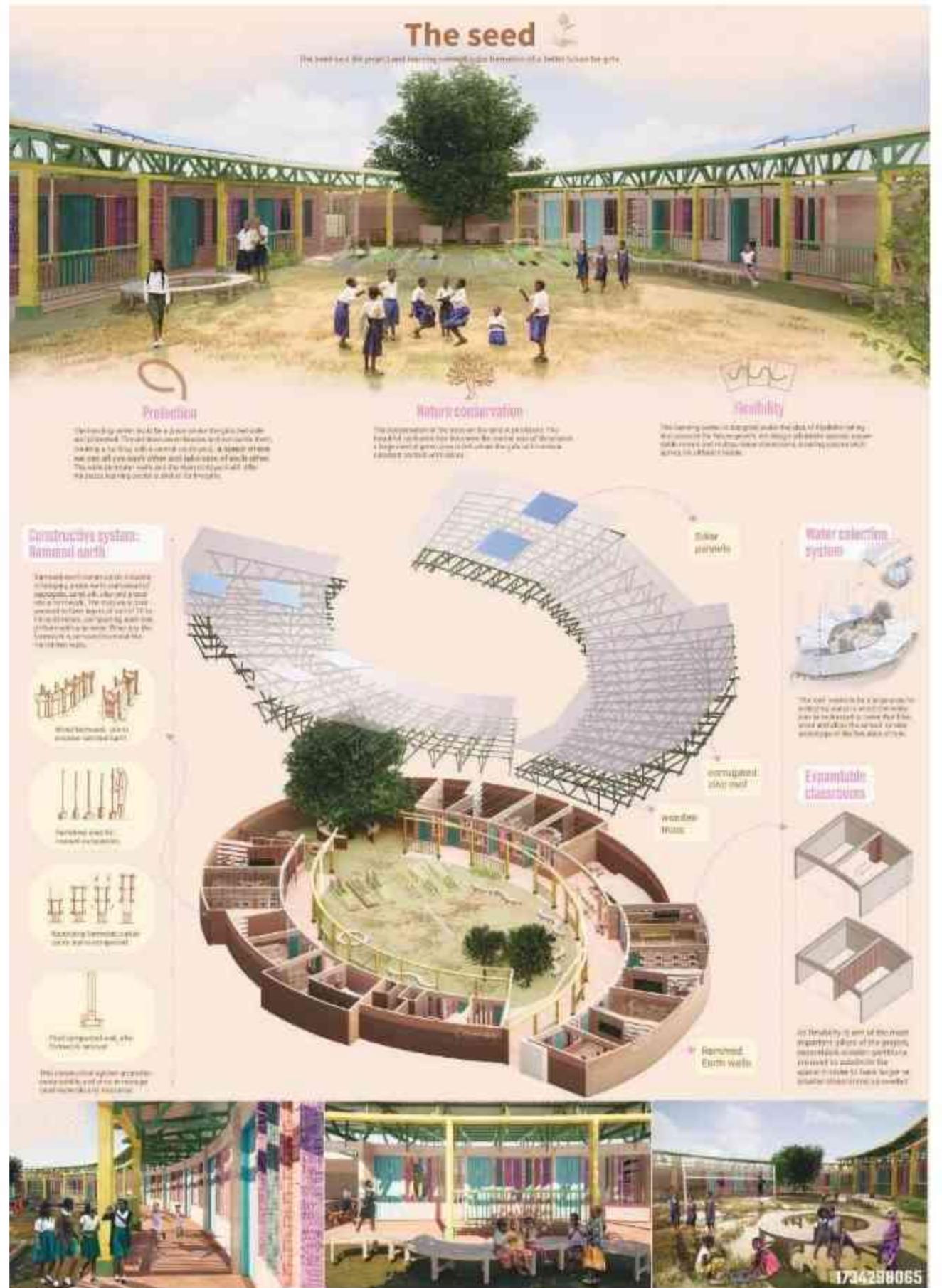
The Seed Learning Center

Type: Competition

Date: Spring 2022

For: Archstorming Kurandza Learning Center

Collab: Sofia Hernandez



"The Seed Learning Center" is an architectural proposal inspired by safeguarding seeds for optimal growth, with a primary focus on providing a secure and nurturing environment for the development of Mozambique girls. The design centers around three key principles: protection, flexibility, and joy.

Ensuring visibility and security, the center adopts a cloistered layout, intentionally visible from any vantage point, fostering an environment where girls can actively look out for one another. This design not only enhances safety but also symbolizes the girls' collective ability to protect and support each other within the learning center. Nature conservation is a top priority, featuring a central green area and preserved trees, while flexibility is seamlessly integrated for future growth through adaptable and multipurpose spaces.

Joy remains central to the design, cultivating a happy and healthy environment. Spacious, illuminated classrooms, vibrant colors, outdoor areas, and a garden promote emotional well-being. The overarching goal is to fortify the girls' sense of belonging, ensuring their continued presence and growth, inspired by the resilience of the Canhueiro tree. This architectural approach not only provides physical protection but also emphasizes the strength and support derived from the collective bond among the girls themselves.



Diagram: Shelter and views.



Classroom section.



Interior view: Expanded classroom.



Exterior corridor



The Urban Mutation Factory

Type: Academic

Course: Reverse Logistics

Professors: Cyrus Penarroyo

Date: Fall 2024

Collab: Sofia Hernandez

Reverse Logistics in a Consumer Society

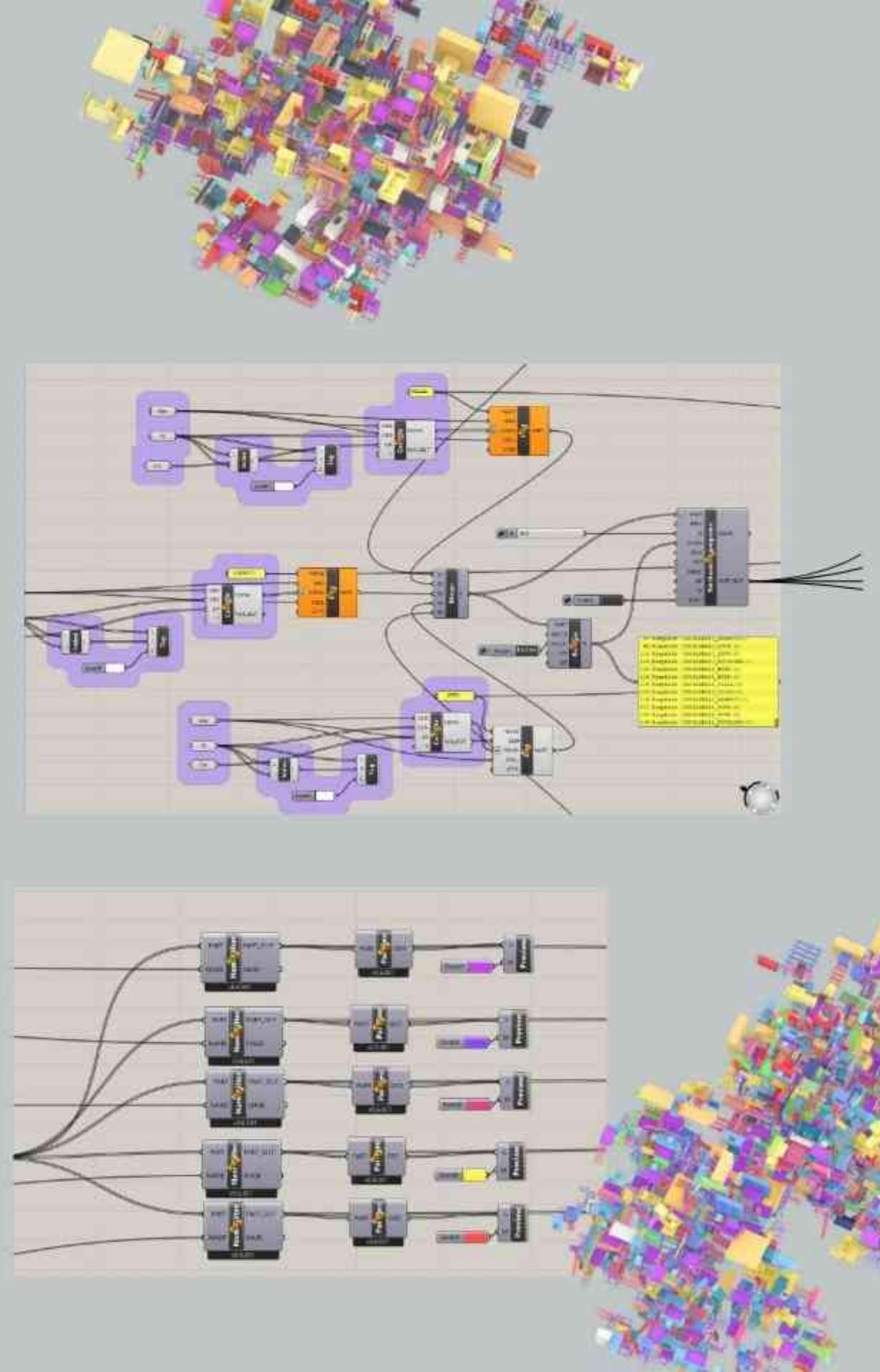
Traditionally, reverse logistics refers to the process of returning products through the supply chain, from the end user back to the retailer or manufacturer. However, in this project, we view reverse logistics as the hidden infrastructure of consumerism, the invisible system managing the products we buy, discard, and return. More than just a functional process, reverse logistics becomes a critique of the consumption cycle that dominates our society, where mass-produced, standardized objects are quickly replaced and discarded, their value short-lived.





Imagine a future where cities become dynamic systems capable of digesting their own consumption. Instead of discarding the remnants of consumer culture, urban environments would absorb, reorganize, and reincorporate these materials into their fabric. This speculative vision positions discarded furniture and objects as the seeds of transformation—a virus that begins in buildings and spreads through the city, reshaping its spaces and structures. In fact, this virus already exists today, growing relentlessly in landfills. These hidden infrastructures of consumerism are deliberately concealed to obscure the consequences of our wasteful habits. By bringing this process into the open, we aim to reframe consumption not as an endpoint but as a cycle the city itself can manage and transform. It is both a call to confront the realities of waste and an invitation to embrace these overlooked materials as integral components of our urban future.







Managing abandoned furniture on the streets of New York

Our research focused on the housewares category, examining the logistics processes of large companies like IKEA, Wayfair, and Amazon. Handling returns of home decor and furniture involves significant energy, resources, and logistics. With high return rates—particularly in e-commerce, where companies like Amazon see up to 20% of items sent back—many of these still-useable products are discarded or sent to recycling centers. The decision to discard is often driven by cost-efficiency, making it cheaper for companies to send products to landfills rather than reintegrate them into the market.

This pushes boundaries and invites us to reimagine the Post Office as a community center as well as a space of movement, and transformation, diy of furniture and houseware. In this sense Returned and abandoned furniture and garments arrive, are processed, and serve the local community before being reintroduced into the city as new artifacts.

From this, we architecturally propose a building that reflects the true scale of the problem, one that does not hide but instead exposes the volume—the tons that are typically buried in landfills.

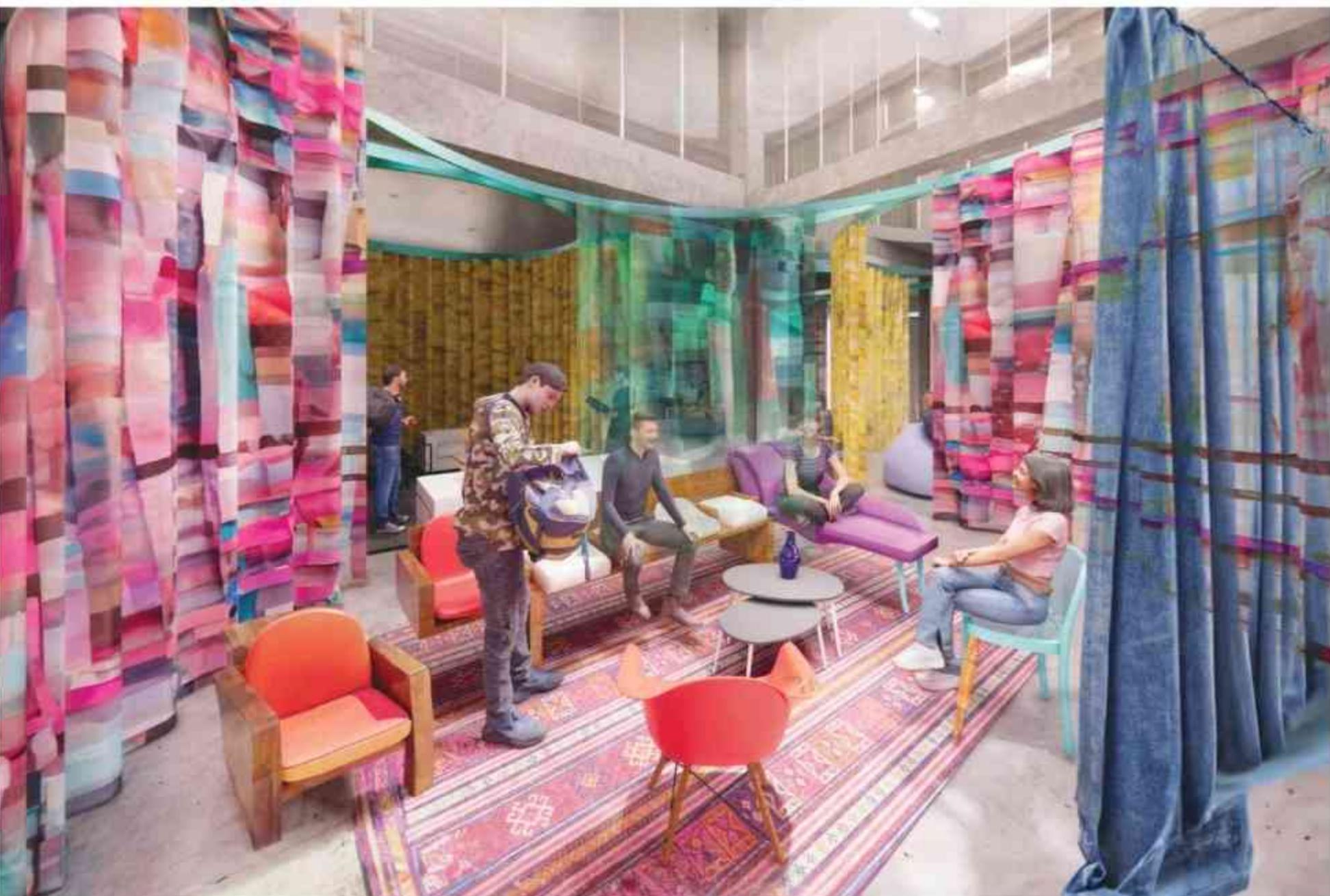
While preserving much of the original building, we propose a new structure that anchors and supports this massive accumulation of discarded furniture.





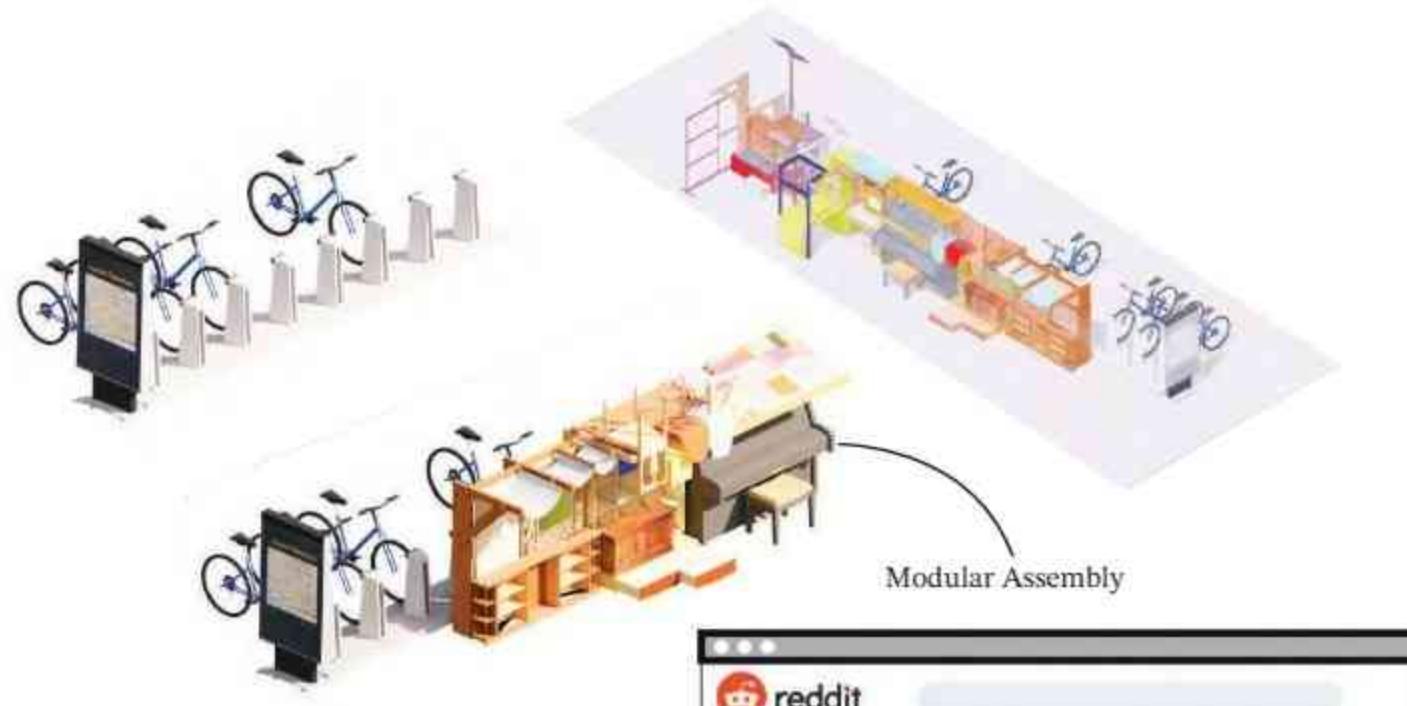
The project reimagines a New York Post Office as a community hub for the transformation and reuse of discarded furniture and household items. It would receive abandoned objects, process them, and return them to the city as renewed artifacts. Architecturally, the proposal aims to reveal, rather than conceal, the scale of the waste problem by exposing the massive volume usually buried in landfills. A new structure is introduced to anchor and support the original building, serving as a visible statement of this ongoing accumulation of discarded material.





In addition to housewares, we also incorporate the return of clothing. Considering the large supply of textiles, we aim to reuse and transform curtains into a performative device. Unlike IKEA's fictional showroom curtains, ours unveil real spaces for community use. These spaces can host diverse activities.

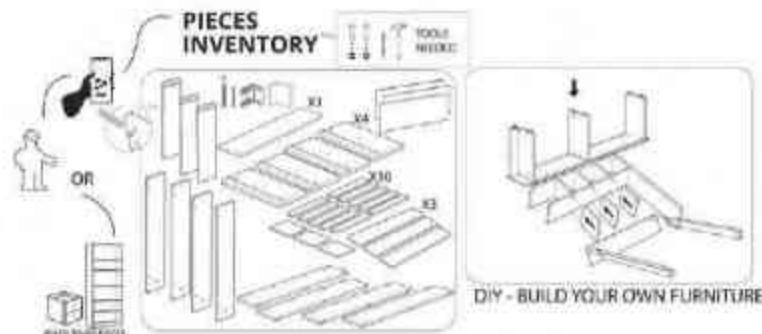
There are workshop spaces where individuals can transform their furniture, areas for designing creations for the city, showrooms displaying these creations for the community's enjoyment, and residences for artists.



BIKE STATION AS A "COMMUNITY WALL"

Adaptable Urban Furniture: Exploring New Urban Opportunities

Extending beyond the building scale, we searched for opportunities to intervene in public spaces. By reusing discarded furniture and repurposing urban elements like scaffolding and light posts, we envision a city where these everyday objects are transformed into dynamic urban interventions. Whether transforming light posts into vertical spaces or scaffolding into modular public rooms, this project challenges the static nature of public spaces, encouraging dynamic, participatory uses.



Community Health Spot-Meeting

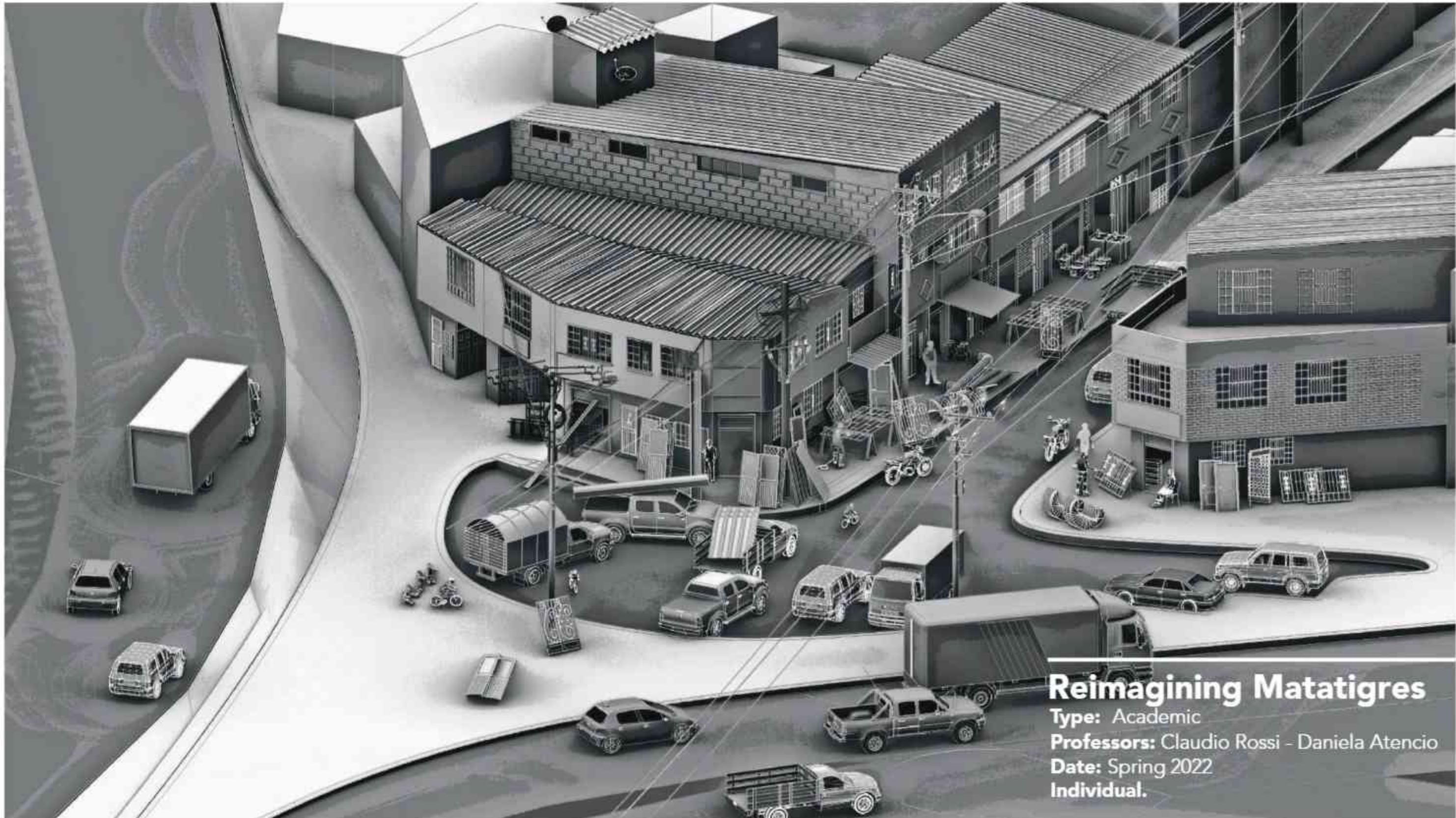


Seafold as opportunity to develop "roots"



MARKET





Reimagining Matatigres

Type: Academic

Professors: Claudio Rossi - Daniela Atencio

Date: Spring 2022

Individual.



Site plan 1:50,000



Dystopian Drawing



Street view



Ornament craftsmen working on the street.

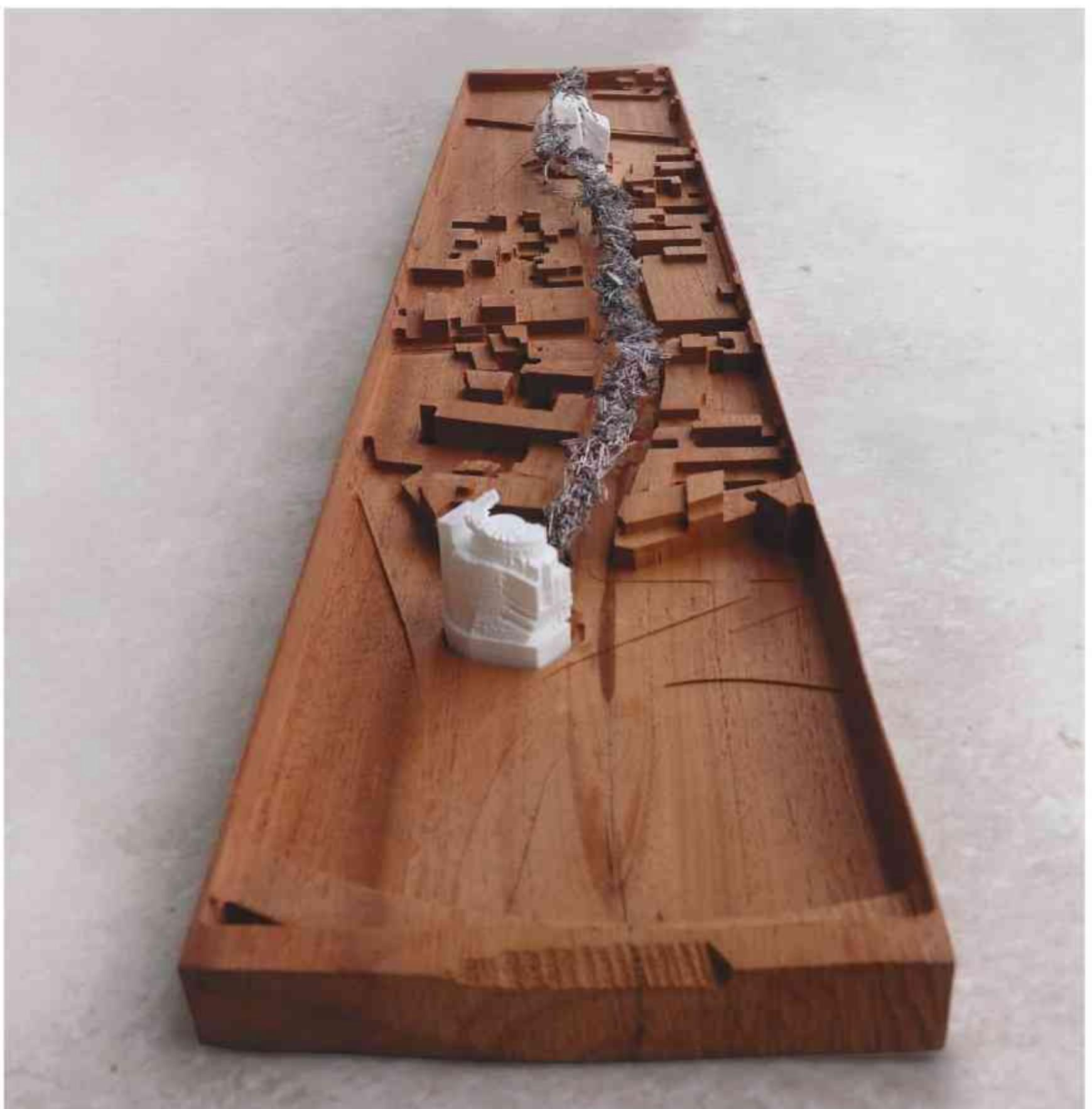


*Ornament maker's workshop.

THE MATATIGRES "ISLAND"

Matatigres is a location situated to the south of Bogotá, belonging to the Bravo Páez neighborhood and positioned north of the Rafael Uribe Uribe locality. In its early days, it encompassed a vast stretch of land that now constitutes part of the Villamayor English neighborhood, Bravo Páez, and Zamore, bordering the Hebrew cemeteries of the Poles and the southern Catholic cemetery. Over time, the land was divided due to the establishment of Community Action Boards, giving rise to the working-class neighborhoods in the area. In 1966, the Rioseco Creek that bordered the area was channeled, and the territory was demarcated.

Since 1999, Matatigres has considerably diminished as a significant portion of its land was allocated for the construction of the Y-shaped bridge or road corridor, built south of Avenida Gaitán Cortés. The bridge, inaugurated in 2000, was automatically named the Matatigres Bridge. The alternate roads surrounding the bridge enclosed the area, leaving only two access routes—one through Avenida Gaitán Cortés and the other along the Avenida Quiroga line, connected by a traffic interchange. Consequently, the sector became somewhat of a desolate and perilous island, littered with debris and waste disposed of by residents from neighboring neighborhoods.



Fisical model.



Perspective of the experimental deck.



Zoomed-in model of the experimental deck.



Timber echoes

Type: Academic

Professor: Zachary E. Mulitauao

Date: Spring 2025

Collab: Sofia Hernandez



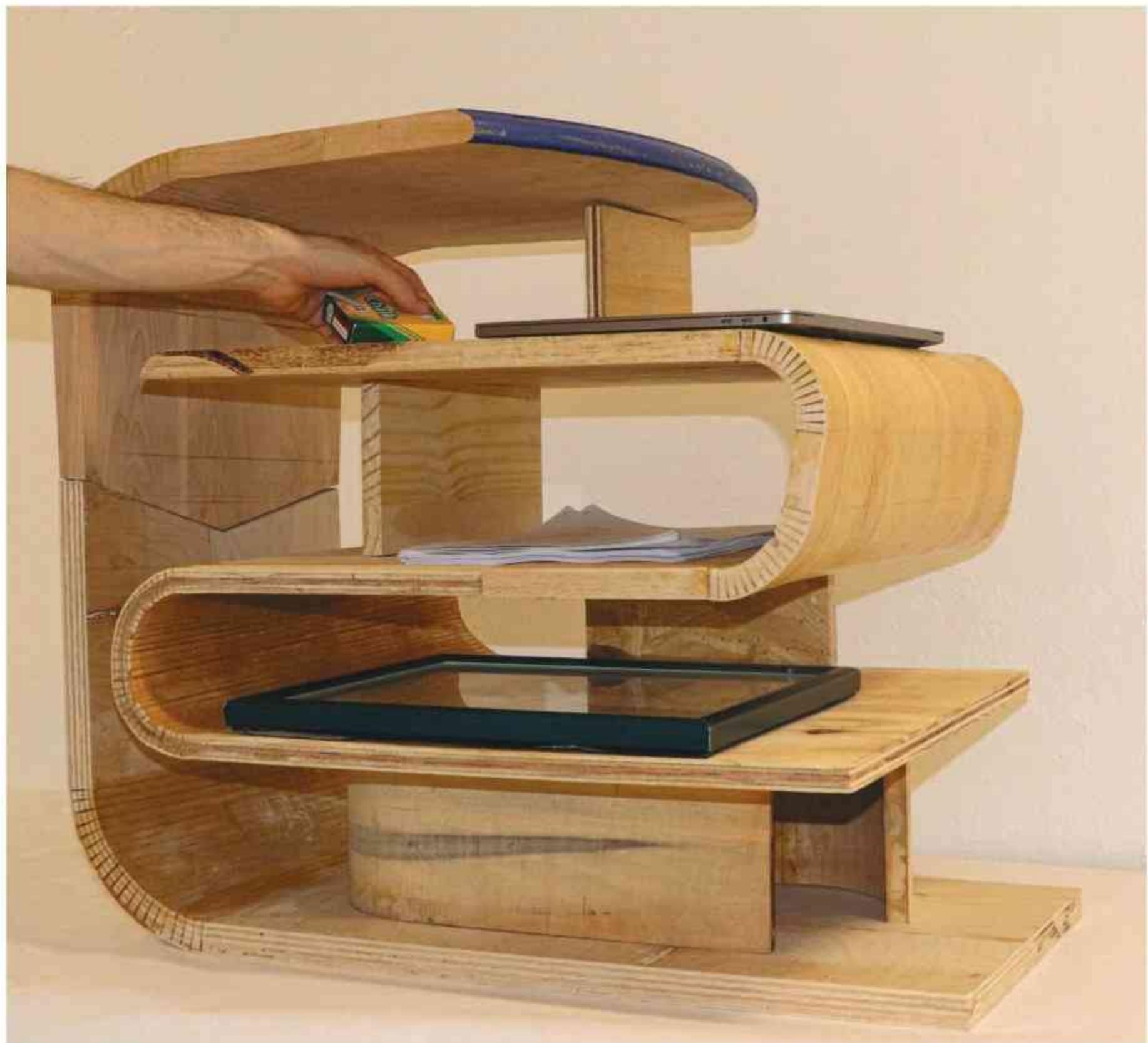
Transforming Urban Waste into Furniture

In the bustling urban environment, materials are constantly being discarded, overlooked, and replaced. "Timber echoes" aims to challenge the conventional understanding of waste by showing how these materials can be reclaimed, recycled, and reinvented. The table represents a mutative process, where the ordinary becomes extraordinary through creativity, craftsmanship, and the redefinition of value.

By reusing what would otherwise be discarded, "Timber echoes" also makes a statement about sustainability in urban environments. It invites a reflection on the life cycle of materials and challenges us to reconsider how we approach consumption, waste, and resources in our cities.

This table is more than just an object; it's a reflection of the city's enduring spirit, one that continues to renew itself despite the challenges it faces. "Timber echoes" represents the city's strength, its capacity to adapt and rebuild, and the resilience that can be found in even the most unexpected places.



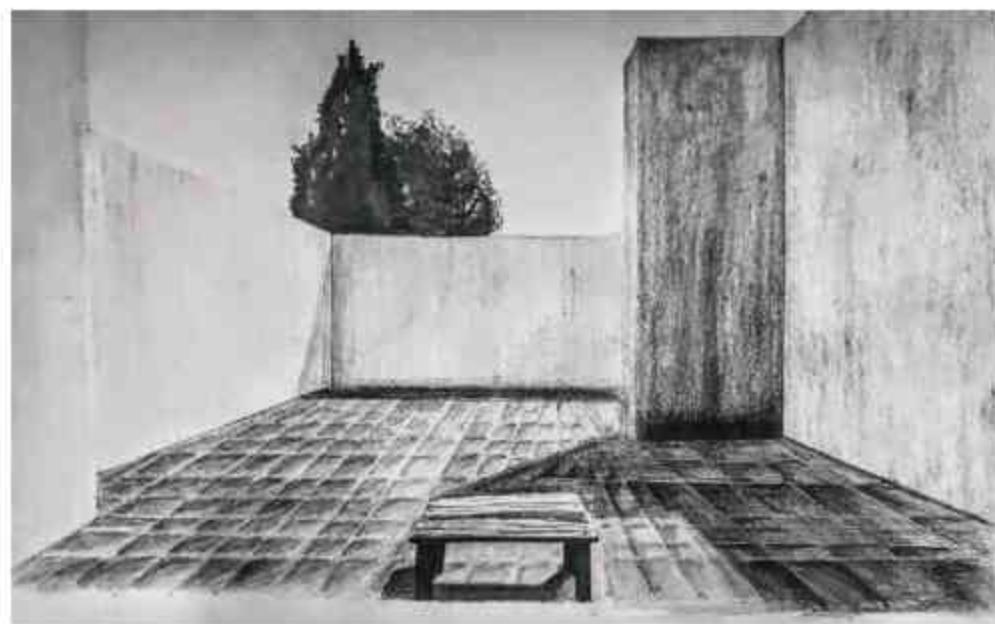




Val-de-Grâce Church



Somewhere within the University of the Andes.



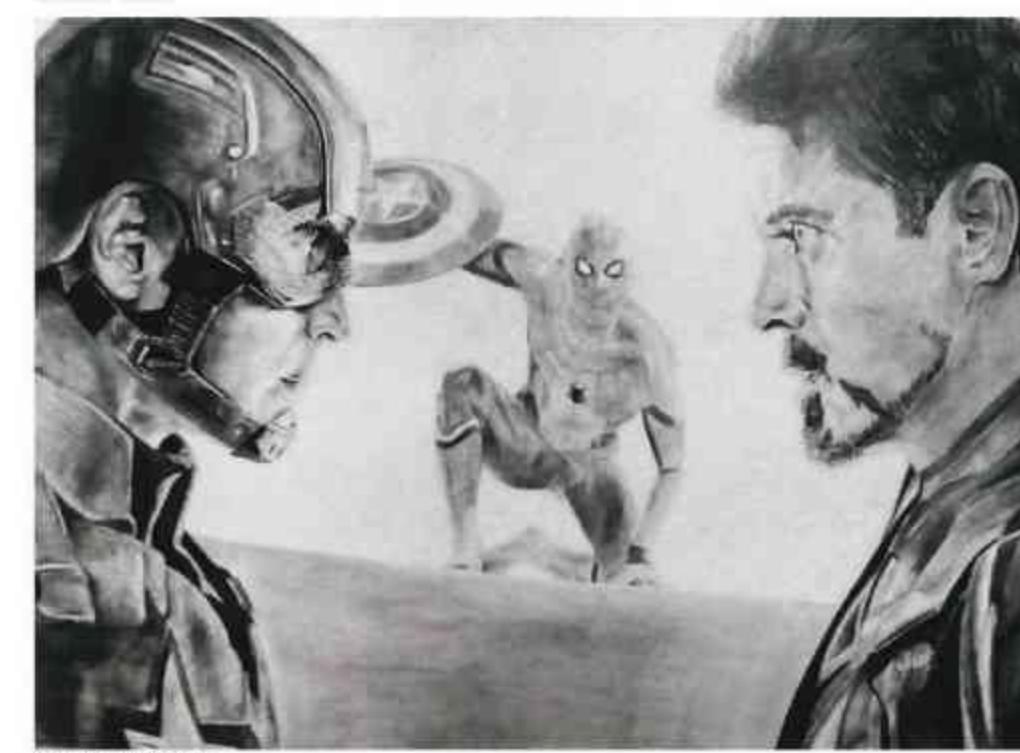
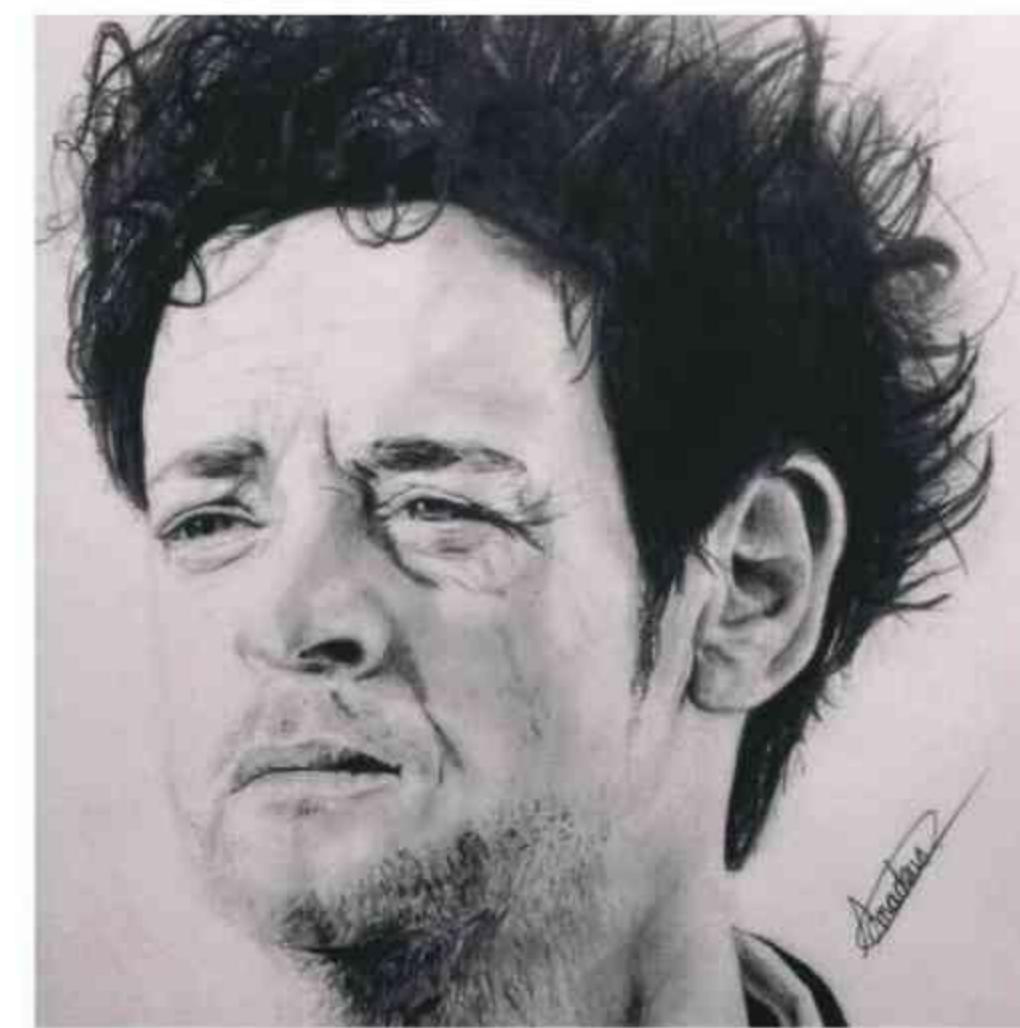
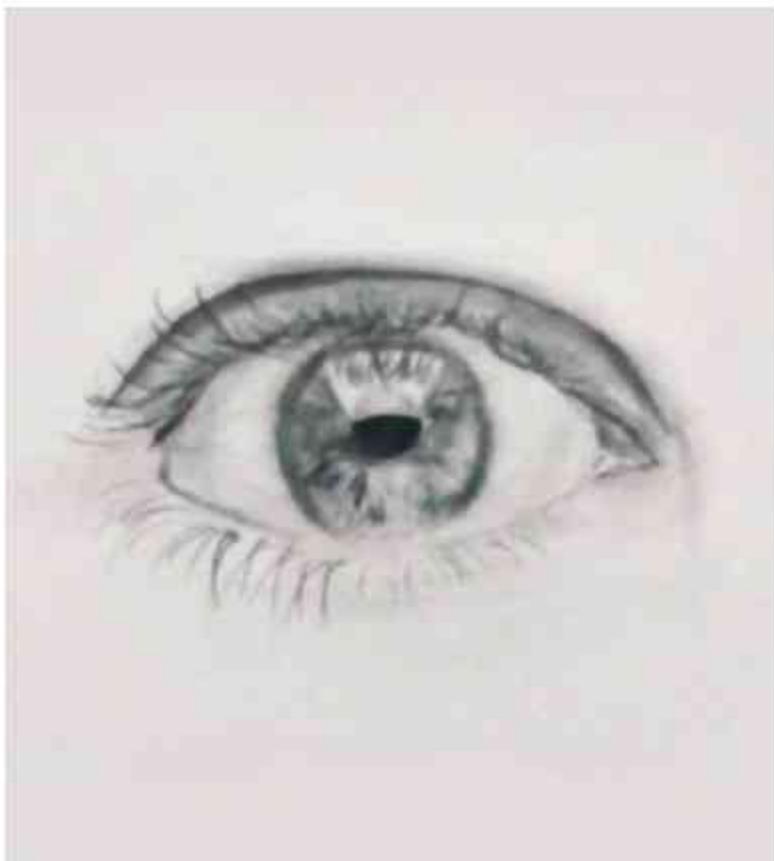
Luis Barragán House.

Sketches

Type: Personal

Date: 2020-2025

Individual.



Gustavo Cerati.

Marvel superhero.