

QUE ZHANG

PORTFOLIO

ADVANCED ARCHITECTURAL DESIGN

SELECTED WORKS FROM 2022-2023

GSAPP

03| Sheeler, Precisionism and the Technical Sublime]

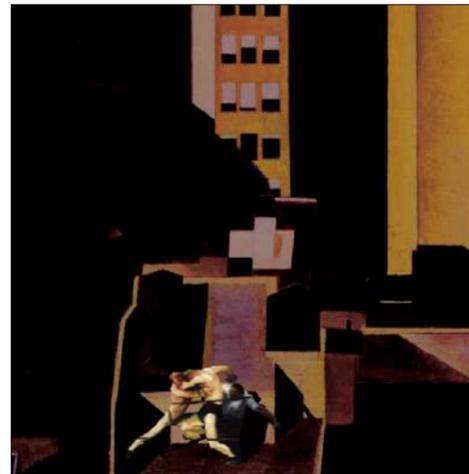
04| [BECOME A FESTA: REWEAVING RYUKYU]



01 | [WASTESCAPE]



02 | The Expected Unexpected]



01 [WASTESCAPE]

[LOCATION] MANHATTAN, NY
 [ACADEMIC] 2022 SUMMER, ADV STUDIO
 [INSTRUCTOR] DAVID MOON
 [COLLABORATOR] NUOFAN XU



Speculative Urban Infrastructure

If you in an apartment building on the roosevelt island, you throw your trash out into the pipes like in other high-rise apartments. But unlike the conventional ducts, roosevelt island has a mechanical vaccumm sucking system that bring the ducts together, send your waste directly to the compacting facility. Image above is the control room inside the central facility of this complicated tube system. Built in 1974, the system serves more than 14000 residents on the island. By depolying the system, one can rarely spots garbage trucks or waste bags piling up on the streets, so common in other areas of NYC.

Roosevelt Island Automated Vacuum Assisted Compacting facility
 Roosevelt
 1974
 Young, Michelle. "Inside Roosevelt Island's Futuristic Pneumatic Tube Trash System." Untapped New York, April 9, 2020. <https://untappedcities.com/2020/04/09/inside-roosevelt-islands-futuristic-pneumatic-tube-trash-system/>.

Nuofan Xu

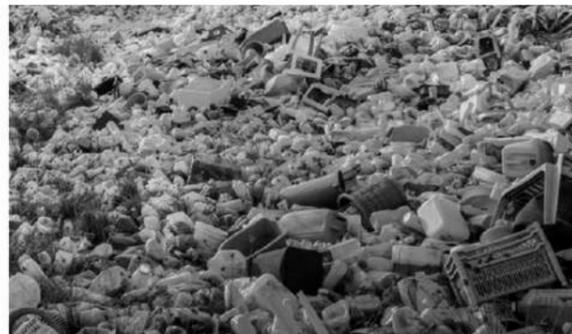


Scaffolding

Scaffolding fell on Broadway and Prince in the Soho neighborhood of New York, Nov. 19, 2017. Why Is There So Much Scaffolding in NYC? As Local Law 11 requires new filings for each building every five years, every city block will have buildings going through various stages of facade repairs — perhaps for months or even years.

Scaffolding collapse in New York City's busy SoHo neighborhood
 2017
abcnews.go.com

Que Zhang



VIGNETTES 01



VIGNETTES 02

SCAFFOLDING IN NYC

INSTRUCTOR: DAVID EUGEN MOON
NUOFAN XU / QUE ZHANG
ARCHA 4853_AAD_Studio

Default style

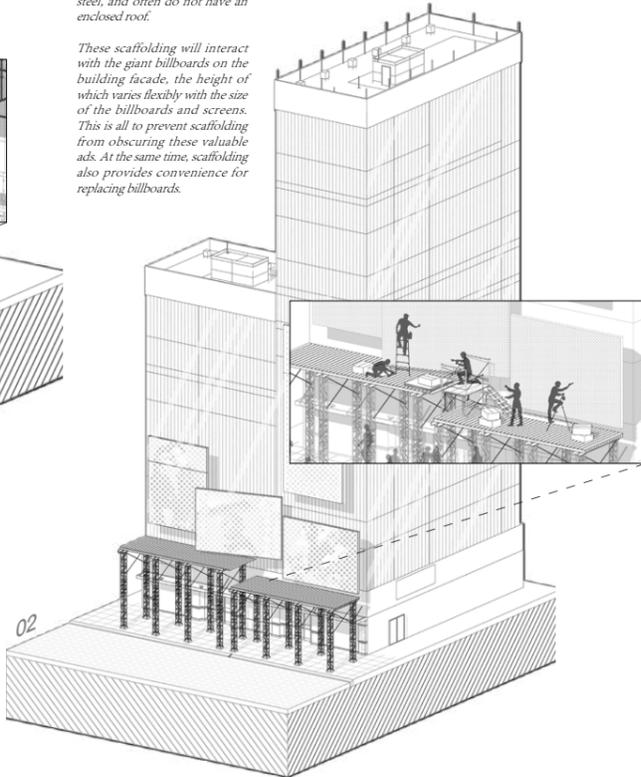
The most common scaffolding in New York City has the iconic dark green roof. The bottom is made of steel pipes and is built above the sidewalk. This scaffolding is widely distributed in Manhattan, Brooklyn, Queens, and even Flushing. Its main function is to prevent bricks or other debris from the buildings above from causing injury to pedestrians on the sidewalk. At the same time, scaffolding also provides simple shelter for the homeless.



Efficient style

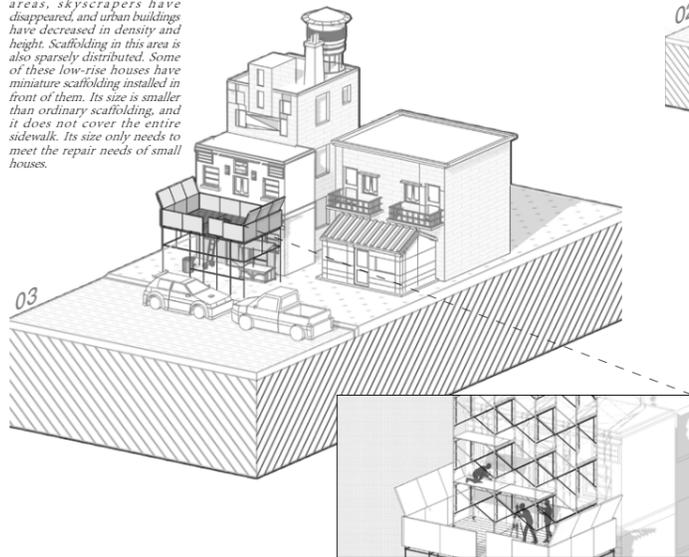
A special kind of scaffolding has appeared in Times Square's shopping malls and office buildings. These scaffolds are of lighter construction, have less steel, and often do not have an enclosed roof.

These scaffolding will interact with the giant billboards on the building facade, the height of which varies flexibly with the size of the billboards and screens. This is all to prevent scaffolding from obscuring these valuable ads. At the same time, scaffolding also provides convenience for replacing billboards.



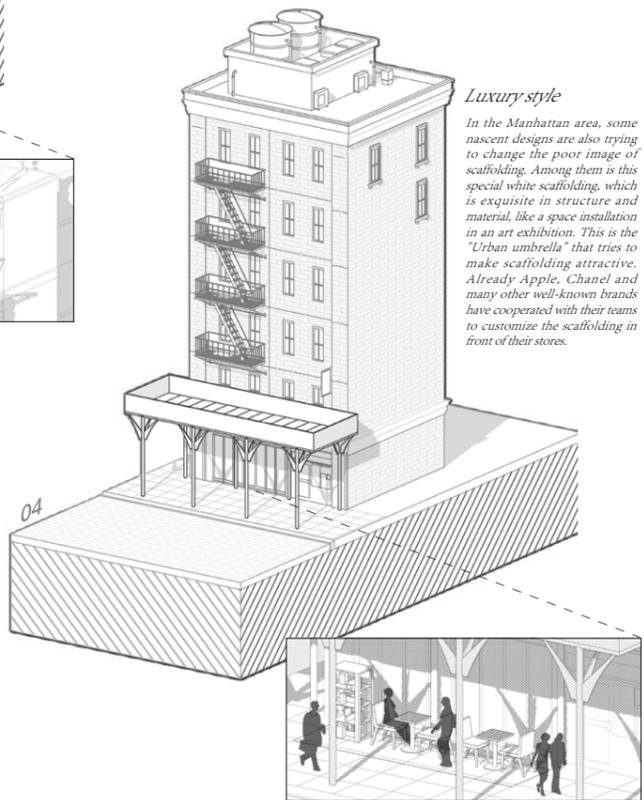
Mini style

In the Corona and Flushing areas, skyscrapers have disappeared, and urban buildings have decreased in density and height. Scaffolding in this area is also sparsely distributed. Some of these low-rise houses have miniature scaffolding installed in front of them. Its size is smaller than ordinary scaffolding, and it does not cover the entire sidewalk. Its size only needs to meet the repair needs of small houses.



Luxury style

In the Manhattan area, some nascent designs are also trying to change the poor image of scaffolding. Among them is this special white scaffolding, which is exquisite in structure and material, like a space installation in an art exhibition. This is the 'Urban umbrella' that tries to make scaffolding attractive. Already Apple, Chanel and many other well-known brands have cooperated with their teams to customize the scaffolding in front of their stores.



Why there are so many scaffolding in NYC

Scaffolding is part of the New York City streetscape, and that will not change anytime soon. It has many uses, but the primary purpose is to protect pedestrians from falling construction debris.

As of June 2021, there are 8,900 scaffolding around buildings in New York City. However, most New Yorkers don't seem to understand how long some scaffolding can last. Every five years, every building in New York City must submit documentation to the Department of Buildings about the condition of its facade.

According to Active Sidewalk Shed Tracker, the average lifespan of scaffolding is less than a year. However, many scaffoldings have been in use for many years.

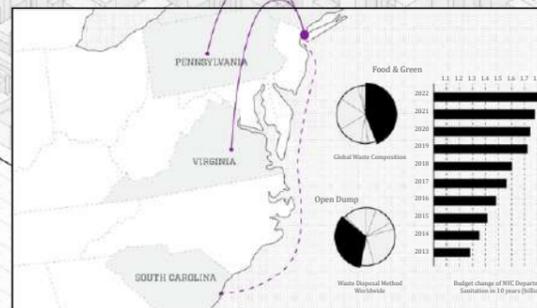
New York has so much scaffolding because building facades need to be inspected and repaired frequently. Because Local Law 11 requires a new application to be filed for each building every five years, buildings on each city block will go through different stages of exterior repairs—which can last months or even years. It all depends on the size of the building and the scope of the work required. It also creates many jobs for engineers, contractors, and scaffolding companies and costs building owners a lot of money.

During these facade restorations, the exterior of the building is often wrapped in netting, and a sidewalk scaffolding shed is erected. There have been cases of owners refusing construction because it was cheaper to rent sidewalk sheds indefinitely and pay small fines than large construction projects. The city has since realized it was a severe problem and increased inspections and fines. So is this growth working? Are people finally repairing their buildings instead of erecting scaffolding to protect pedestrians?



THE LONG VOYAGE of NYC's UNWANTED GARBAGE

INSTRUCTOR: DAVID EUGEN MOON
NUOFAN XU / QUE ZHANG
ARCHA 4853_AAD_Studio

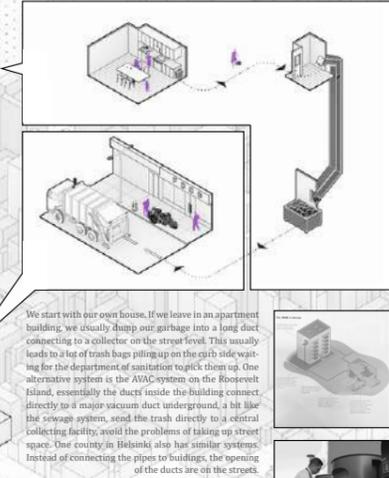


When it comes to the issue of waste crisis, we usually think of kind images where kids sitting on a mountain of garbage sorting them out, or the once beautiful sea shores now full of plastics. Statistically, about 1/3 of the garbage produced worldwide are left as open dumps, meaning they are just left there in an open field. However, we don't really get to see the crisis personally when it comes to the very city we live in. In this analysis drawing the long voyage of NYC's unwanted garbage, we aim to investigate how this city handle the garbage currently and historically, what problems are we facing and what are the more advanced technical options and systems out there to handle our problem.

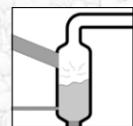
The municipal budget of this department has increased from 1.28 billion dollars to 1.83 billion dollars in 10 years, and the number is still increasing. Part of the reason is that New York City does not really recycle or handle any of the waste produced. Most of them are shipping outside the city. About one fourth is sent to nearby incineration plants such as the one in Newark; the other three fourths are sent out to central New York, Pennsylvania, Virginia and as far as South Carolina.

THE ENVIRONMENTAL INJUSTICE SLIDER

Violence is, if we think about it, a term indicates instantaneous and visible acts posed on a specific entity, a term that indicates various consequences. Thus, the term 'slow violence' is spectacular in a way it renders the significance and the great damage that those incremental behaviors may cause. If Russia's invasion to Ukraine is violence (and sure it is), then the outsourcing of NYC's garbage is the slow violence to the residents who suffer from environmental injustice, a kind of damage which has severe consequences just like a war.



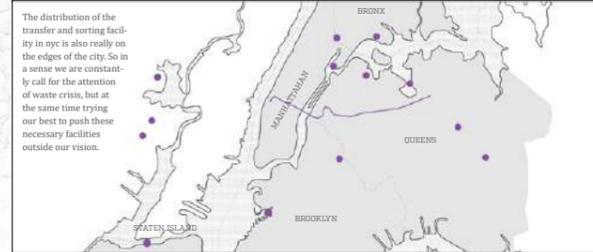
After the department of sanitation collect the curbside bags, then head towards the central collecting facility, and it's usually built on the river-side. In there, they compressed the collected trash into containers and ship them out for machinery of manual sorting. The ship is like a platform, with simple scaffolding structure to hold the containers together. Because of the weight, the ship can not go against the current. Usually the ships have to wait for more than 4 hours for the right current.



There is this emerging method called gasification of the waste recently, essentially using also furnace, but adopt the technique of plasma to turn waste into a synthesis gas, which becomes something else useful, such as the diesel fuels and methane, essentially a clean and eco-friendly way to handle the waste.

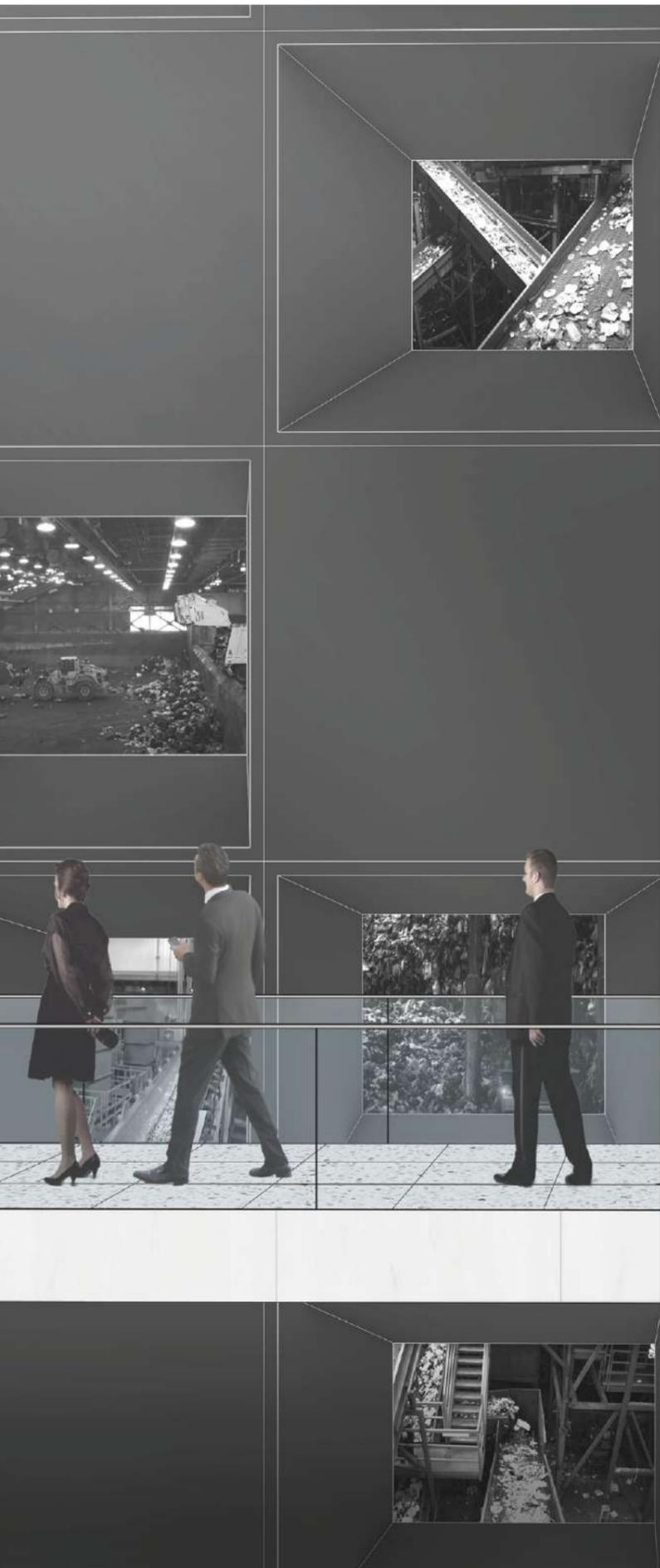


It's also interesting that one of the largest recycling sorting facility is also in NYC in Brooklyn, it uses a series of techniques such as shredding, balancing and magnetizing to separate paper, metal, glass, compress them into blocks and ship to recycling manufacturers.



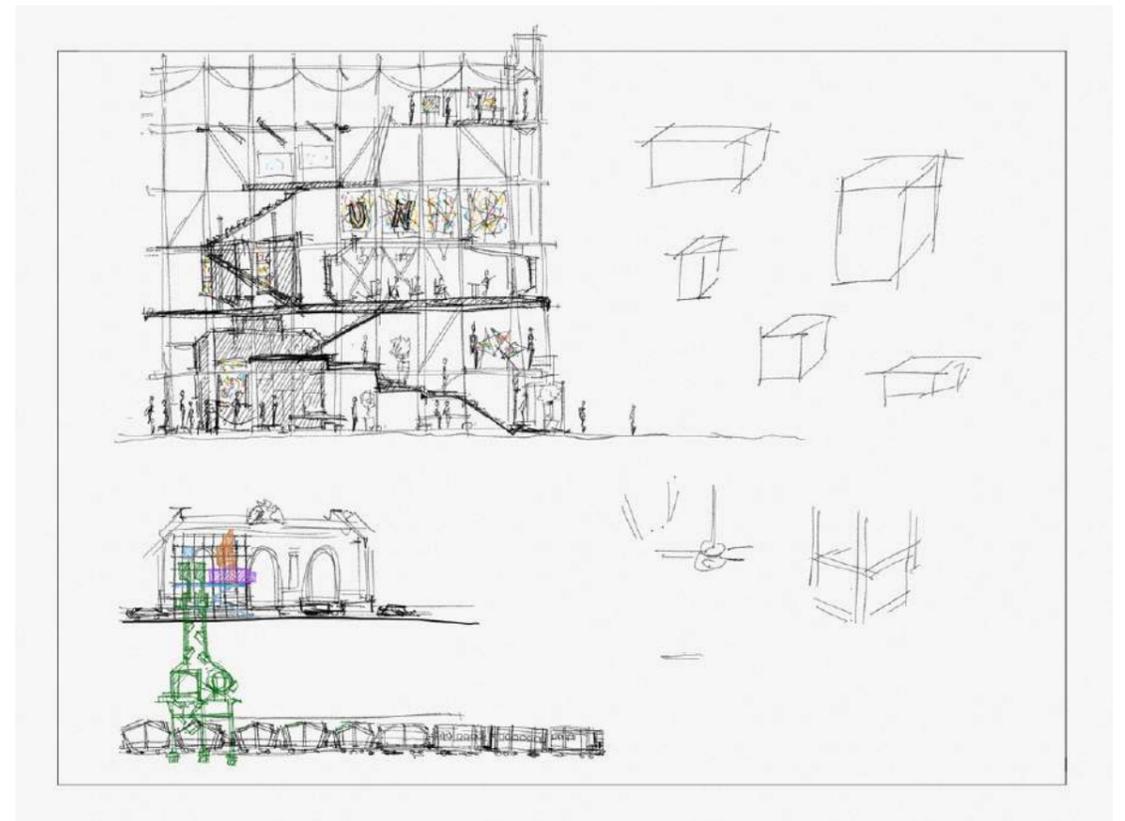
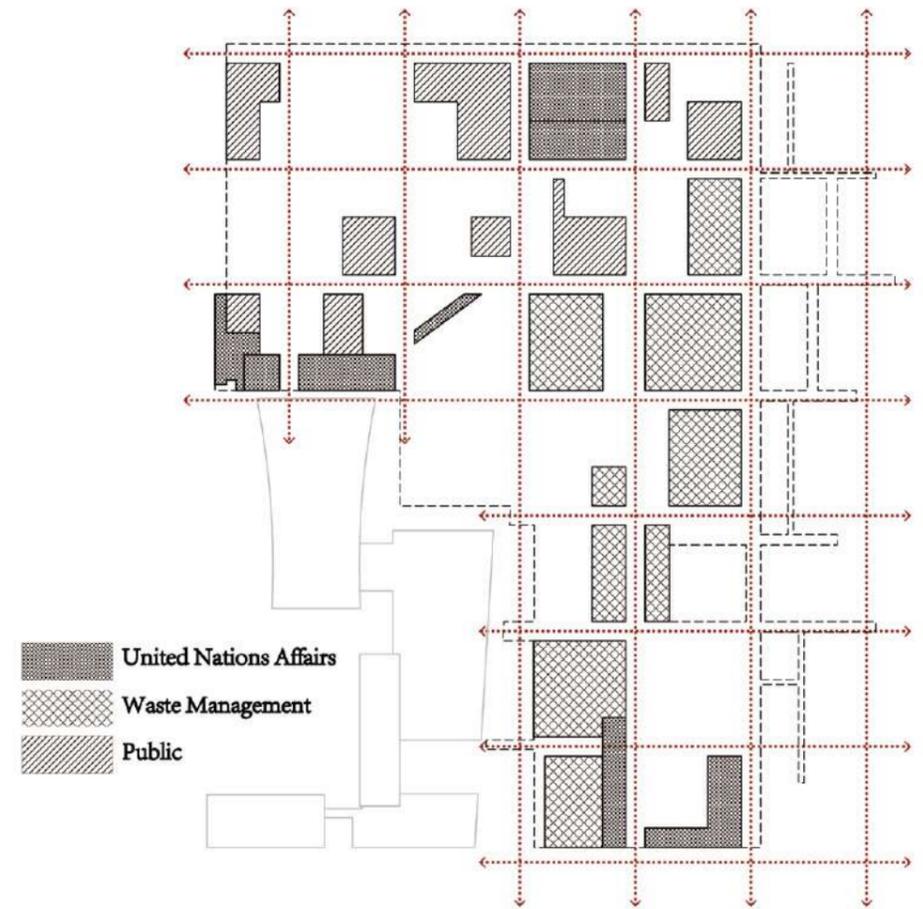
About 1/4 of the waste from NYC goes directly through the river to a local incineration factory in Ironbound county in Newark. There have been protests about the fact that most of the trash facility locates in neighborhoods like Ironbound, usually low income neighborhoods and usually those of color, emitting gas from the burning of the trash.

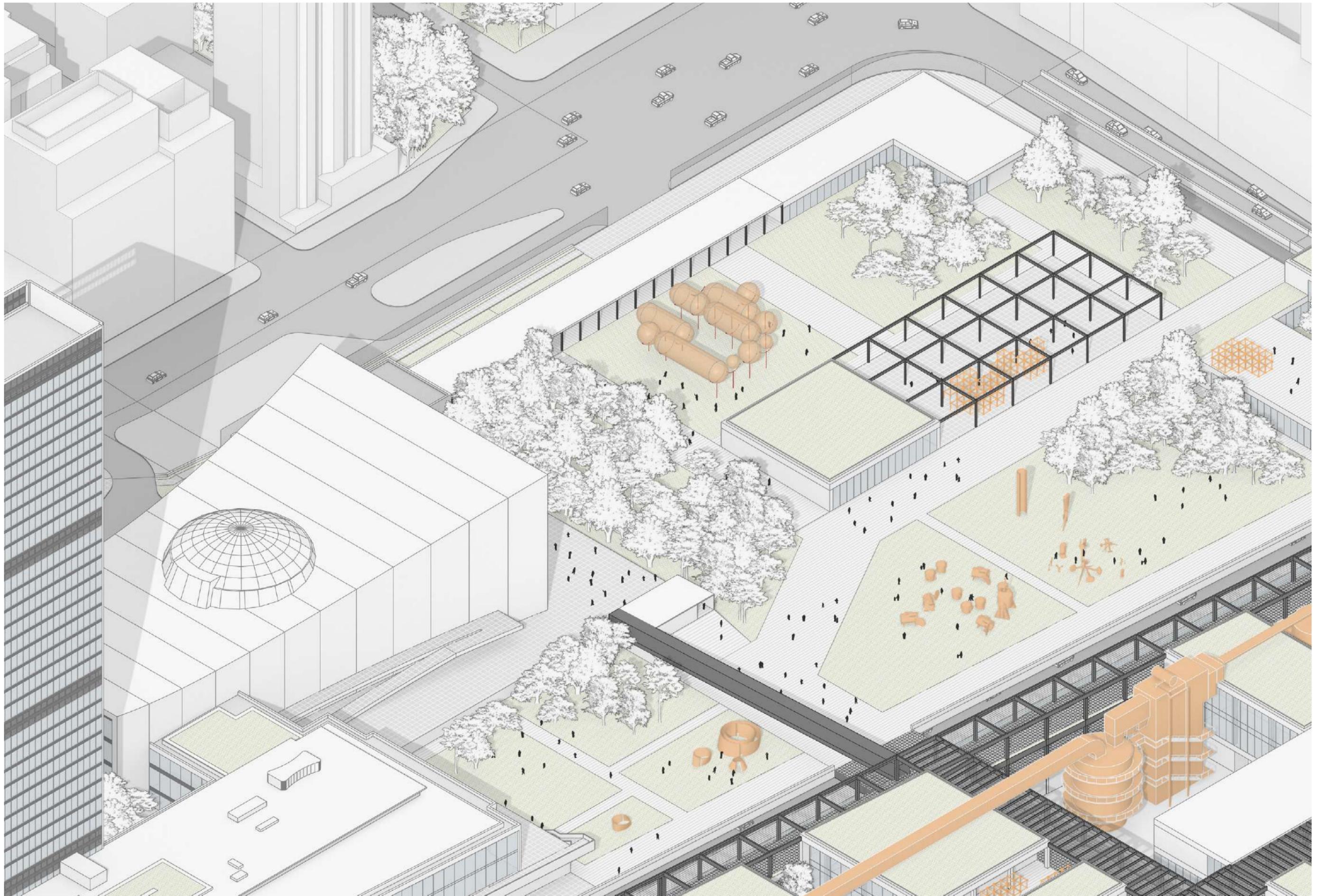
RURAL



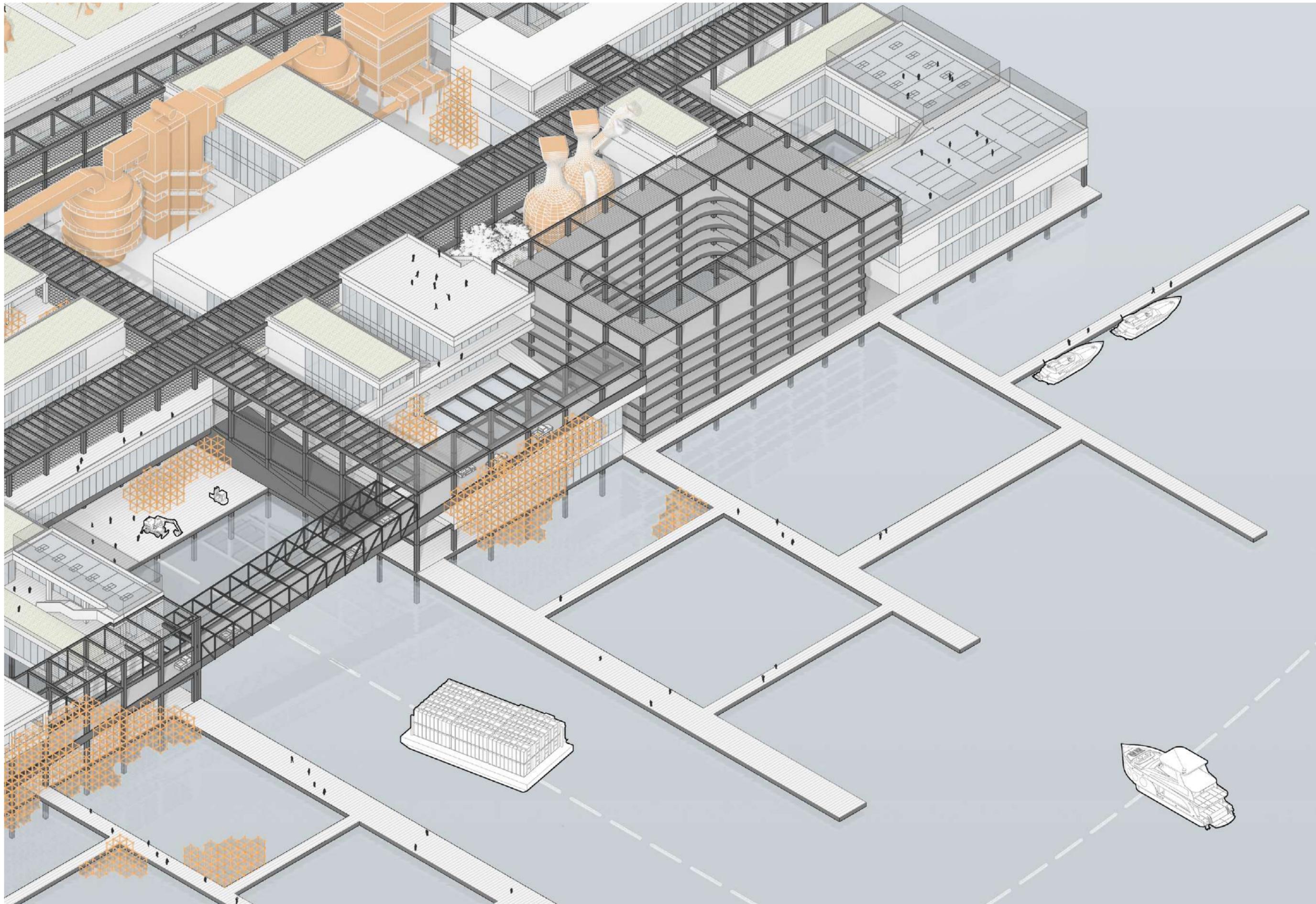


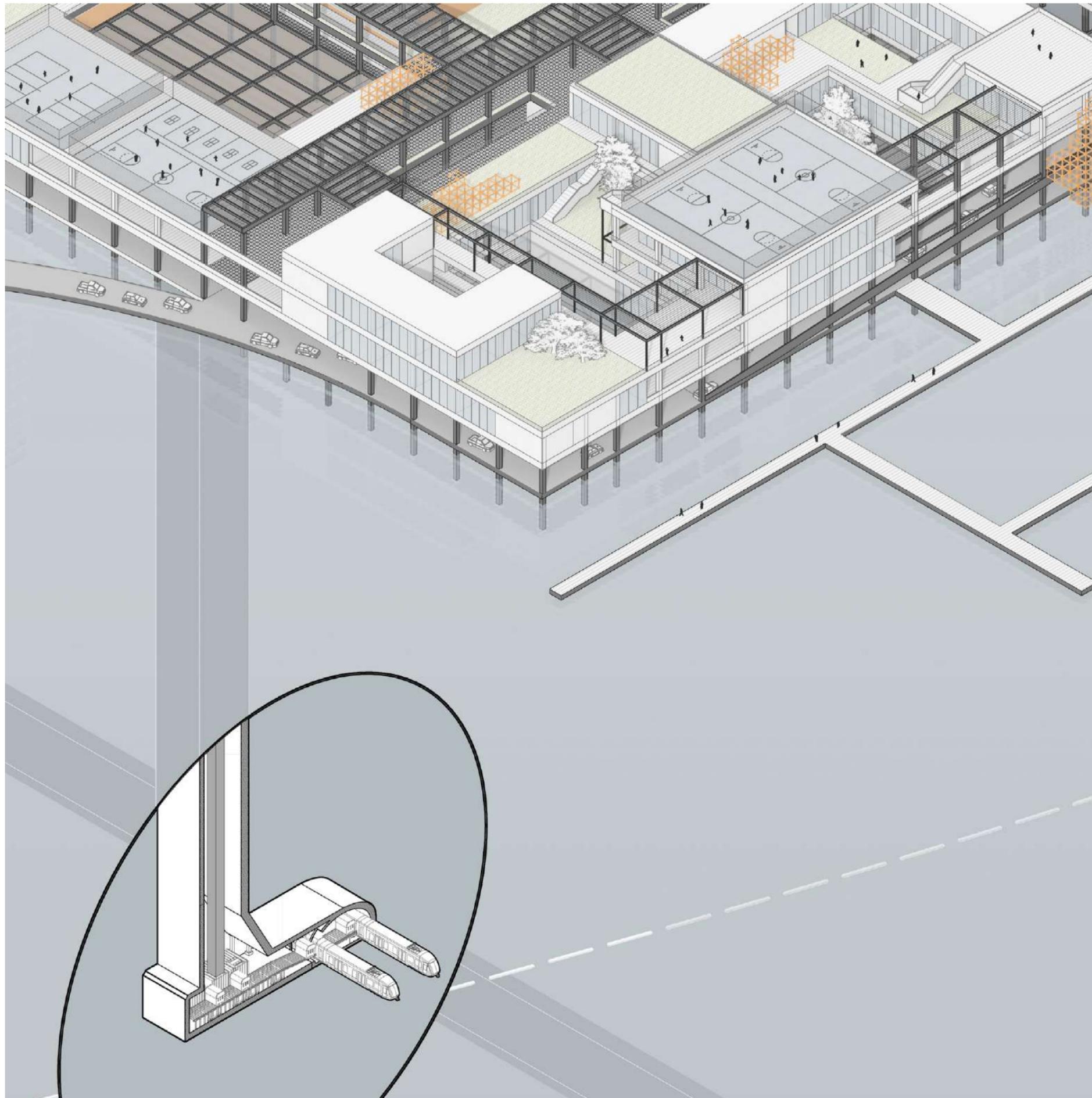
MAT-BUILDING: WASTE TREATMENT FACILITY SKETCH 01



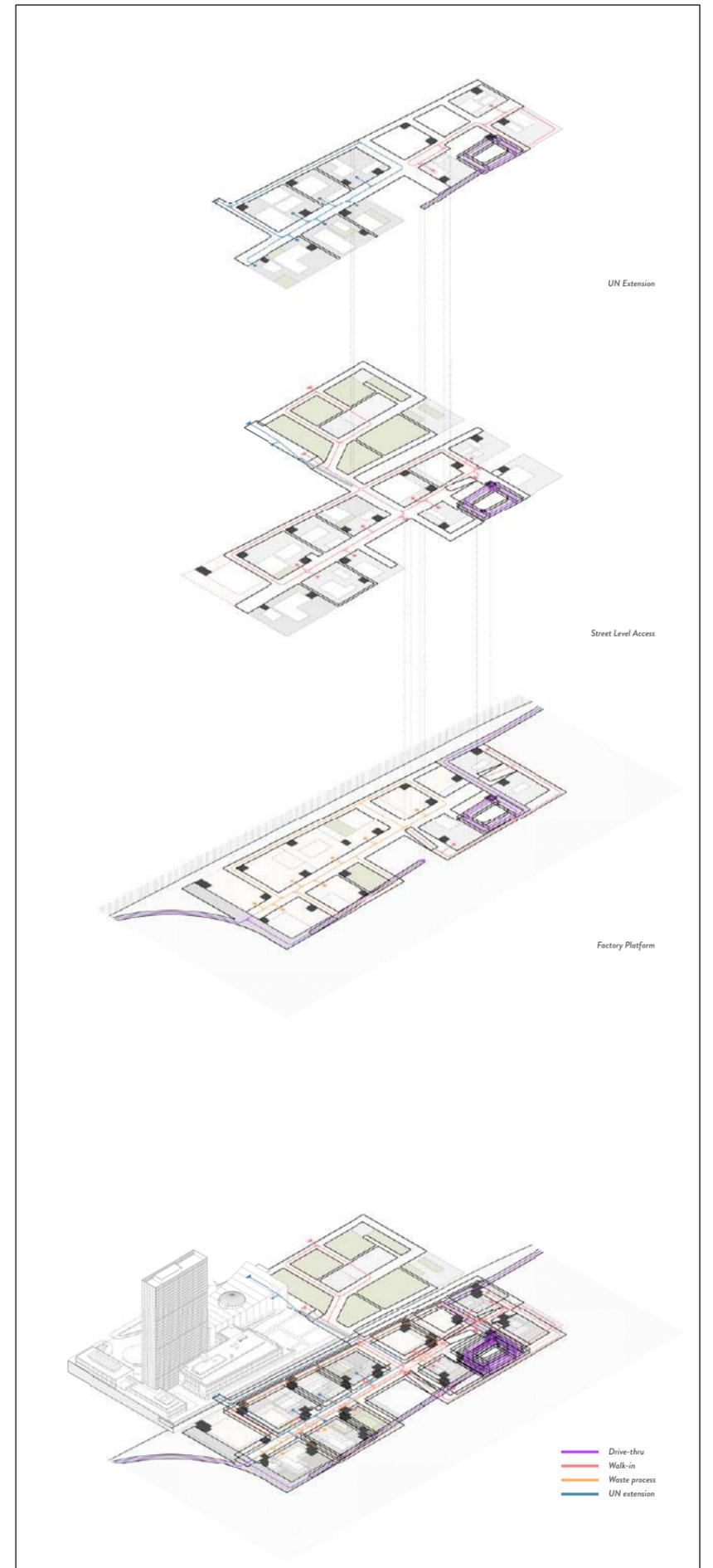


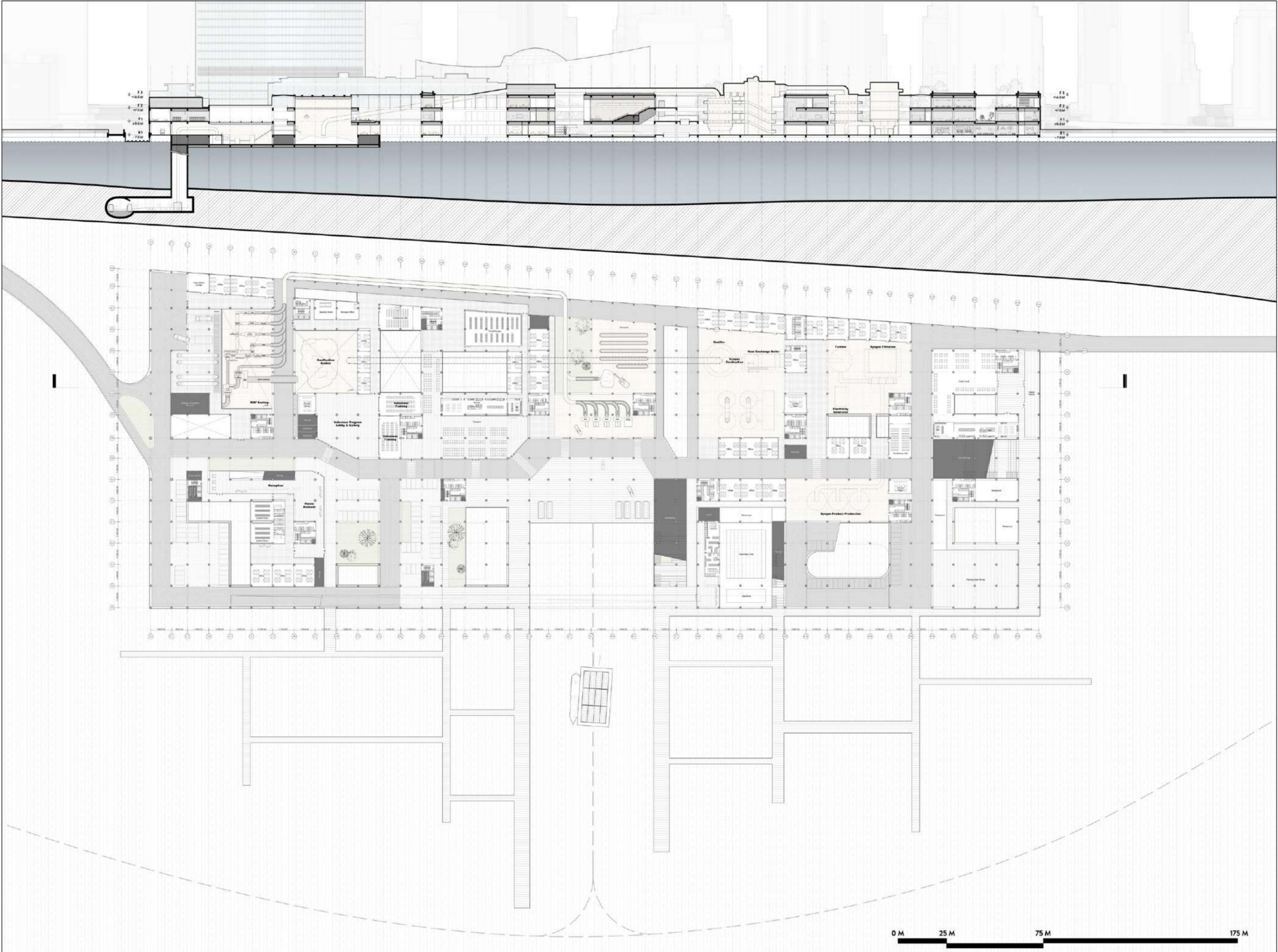
AXONOMETRIC DRAWING OF WASTE TREATMENT FACILITIES 01



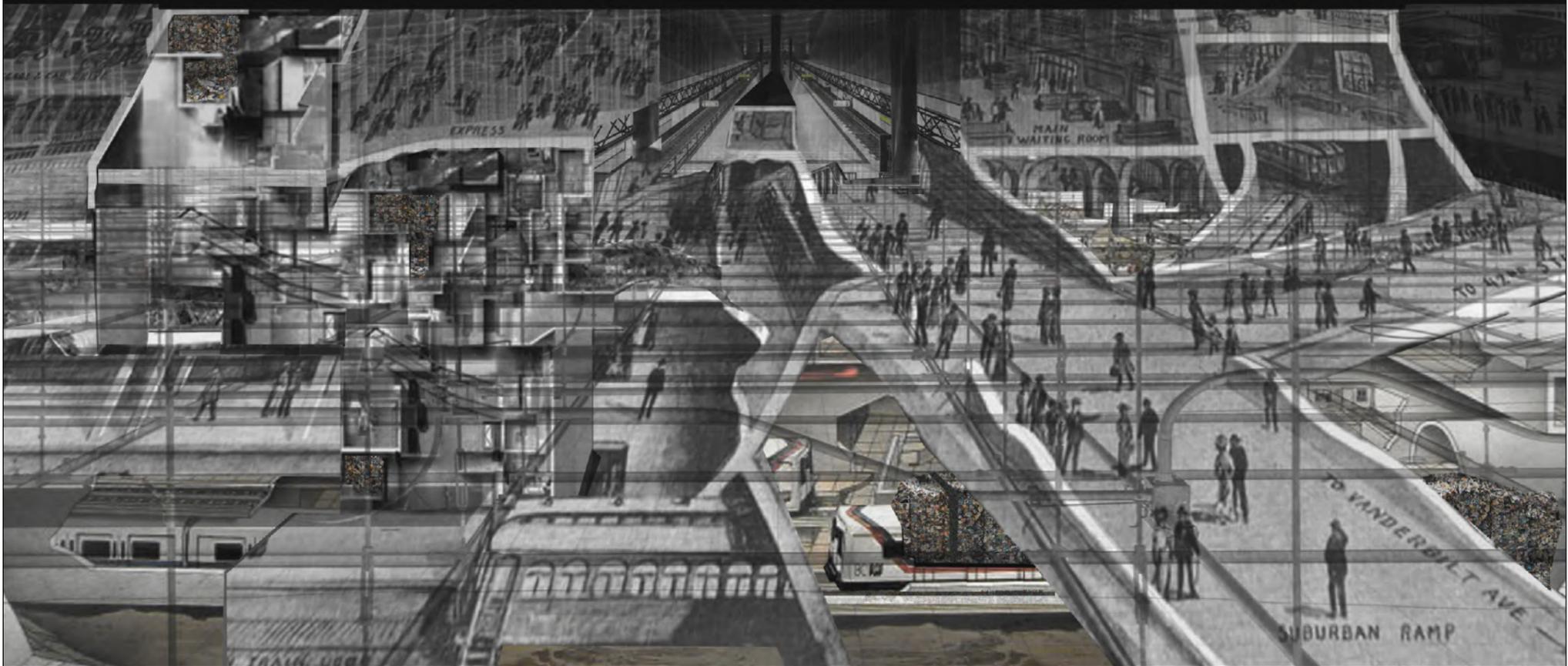


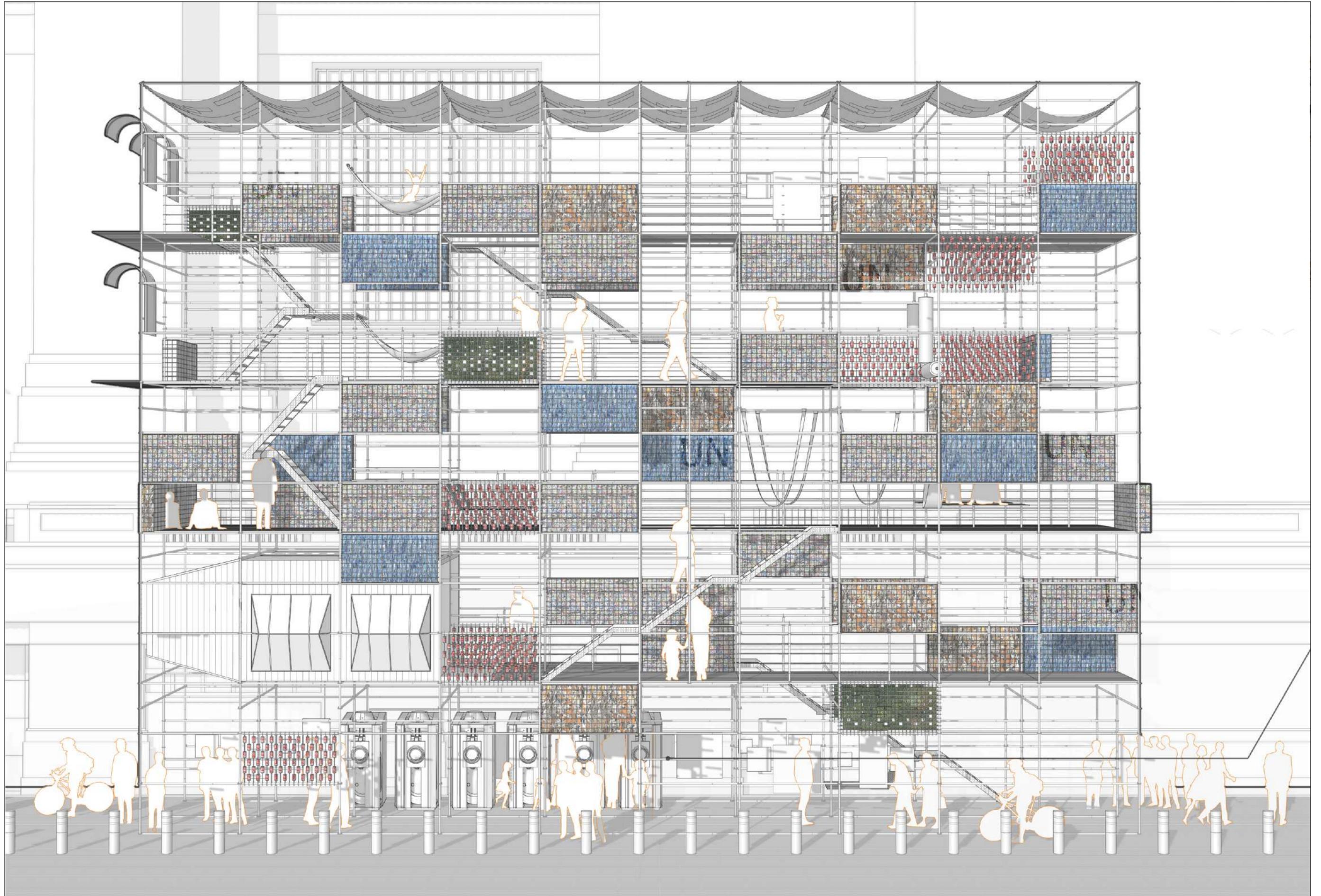
AXONOMETRIC DRAWING OF WASTE TREATMENT FACILITIES 03

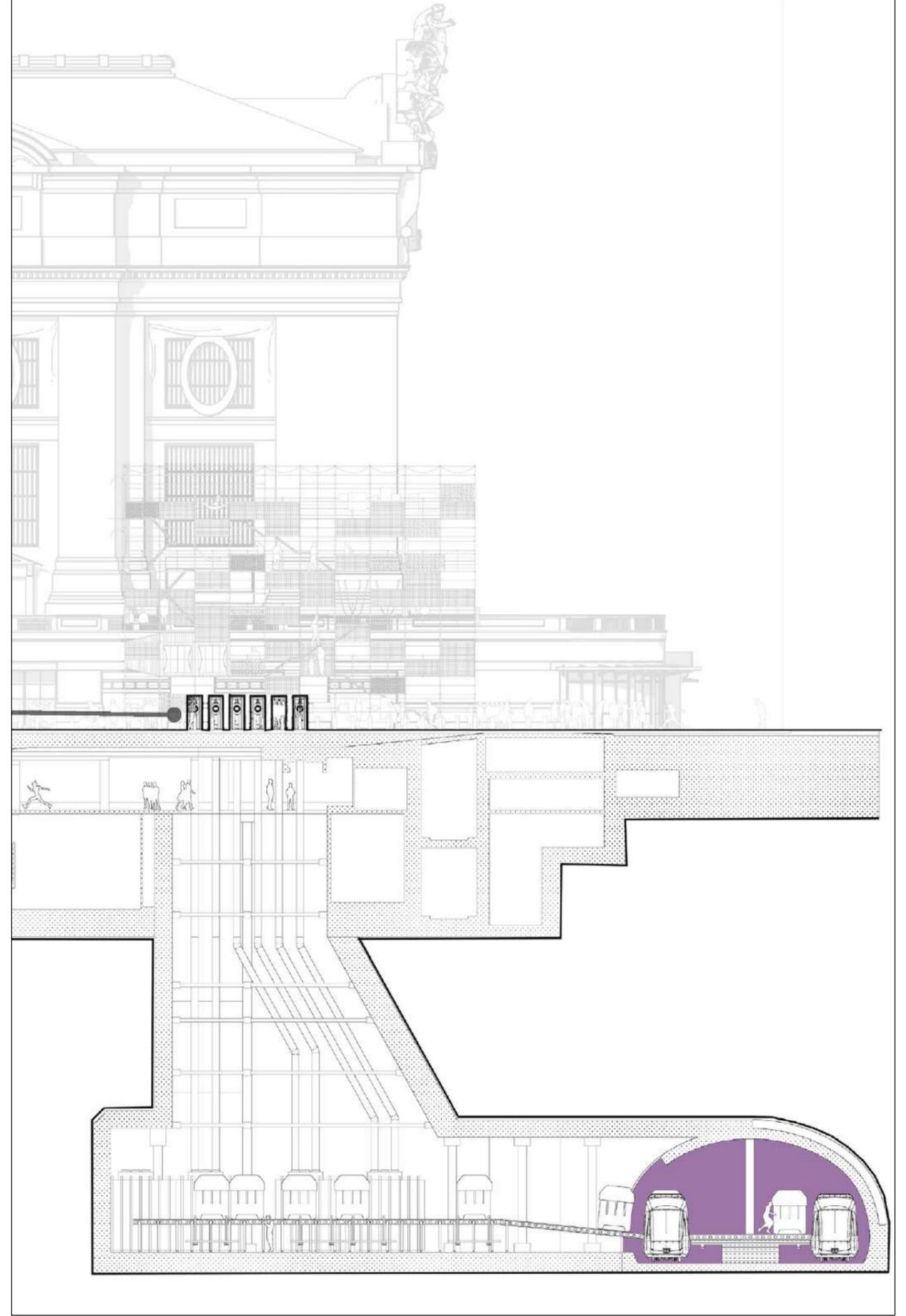


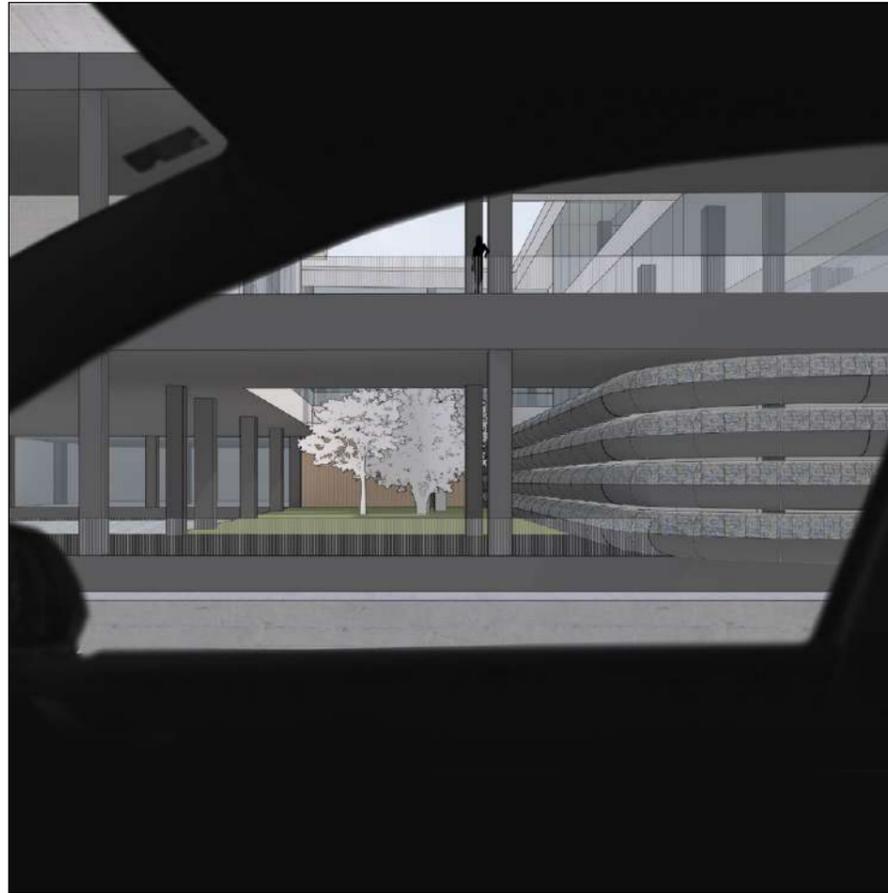
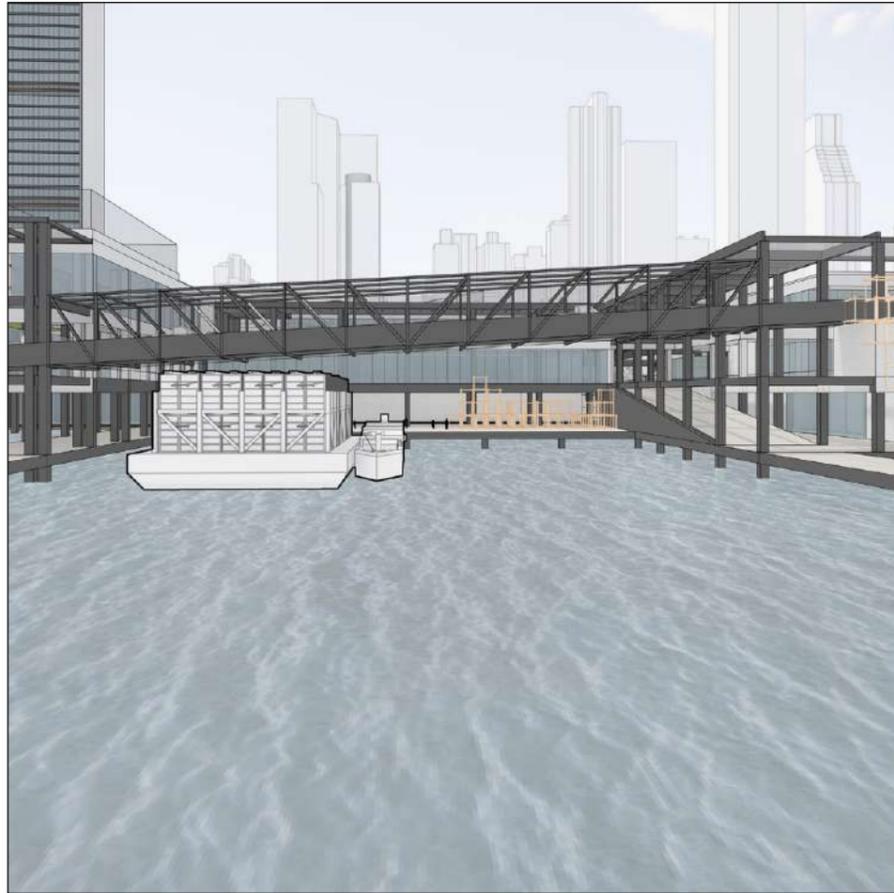


PLAN



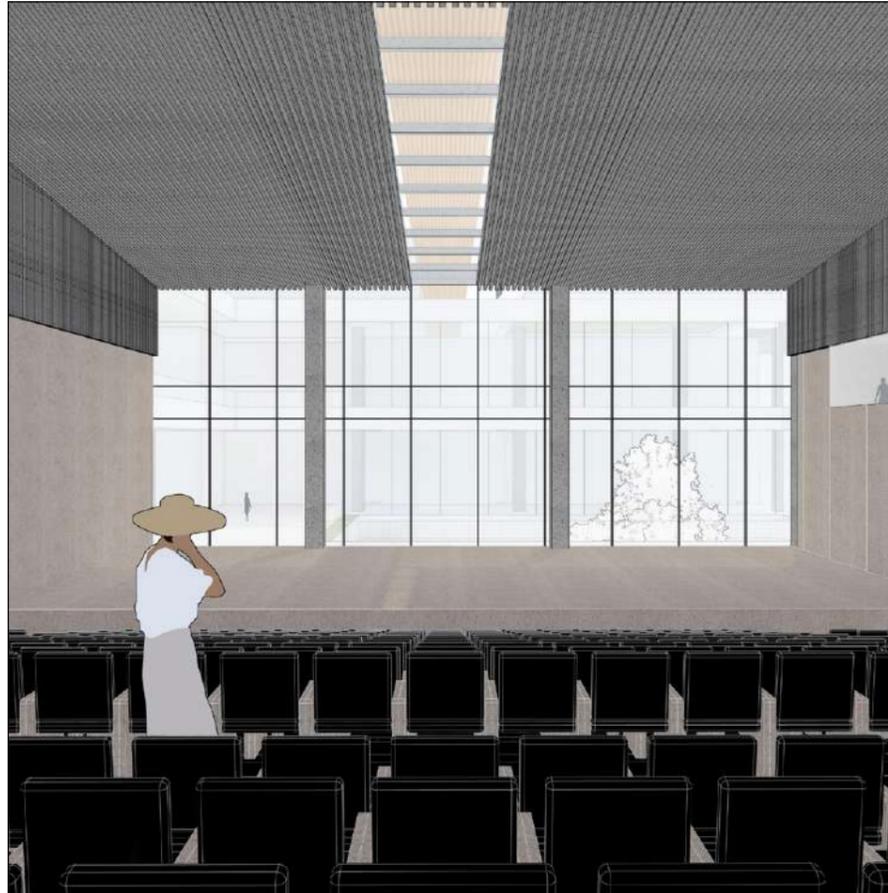




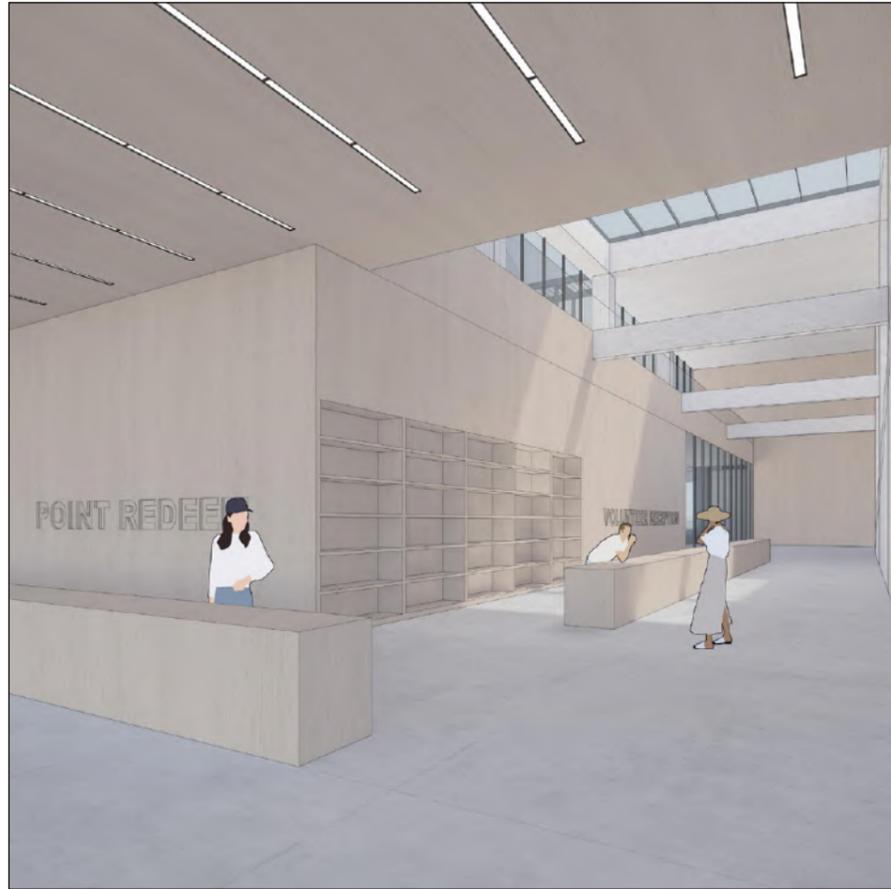


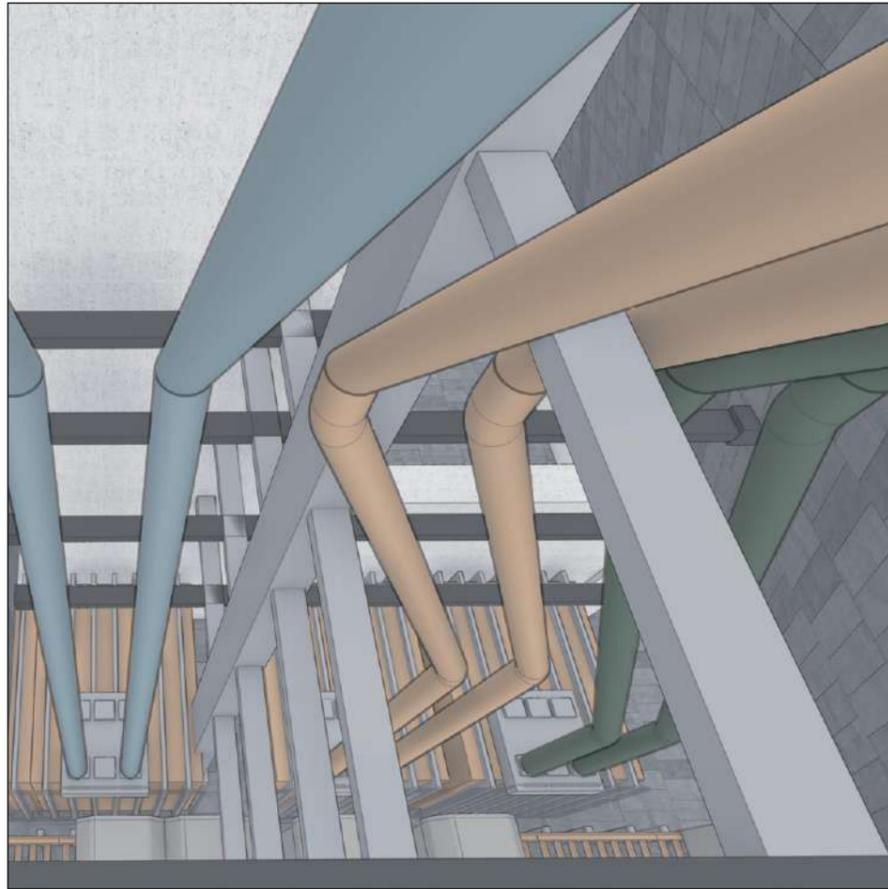


NARRATIVE VISUALIZATION 02



NARRATIVE VISUALIZATION 03



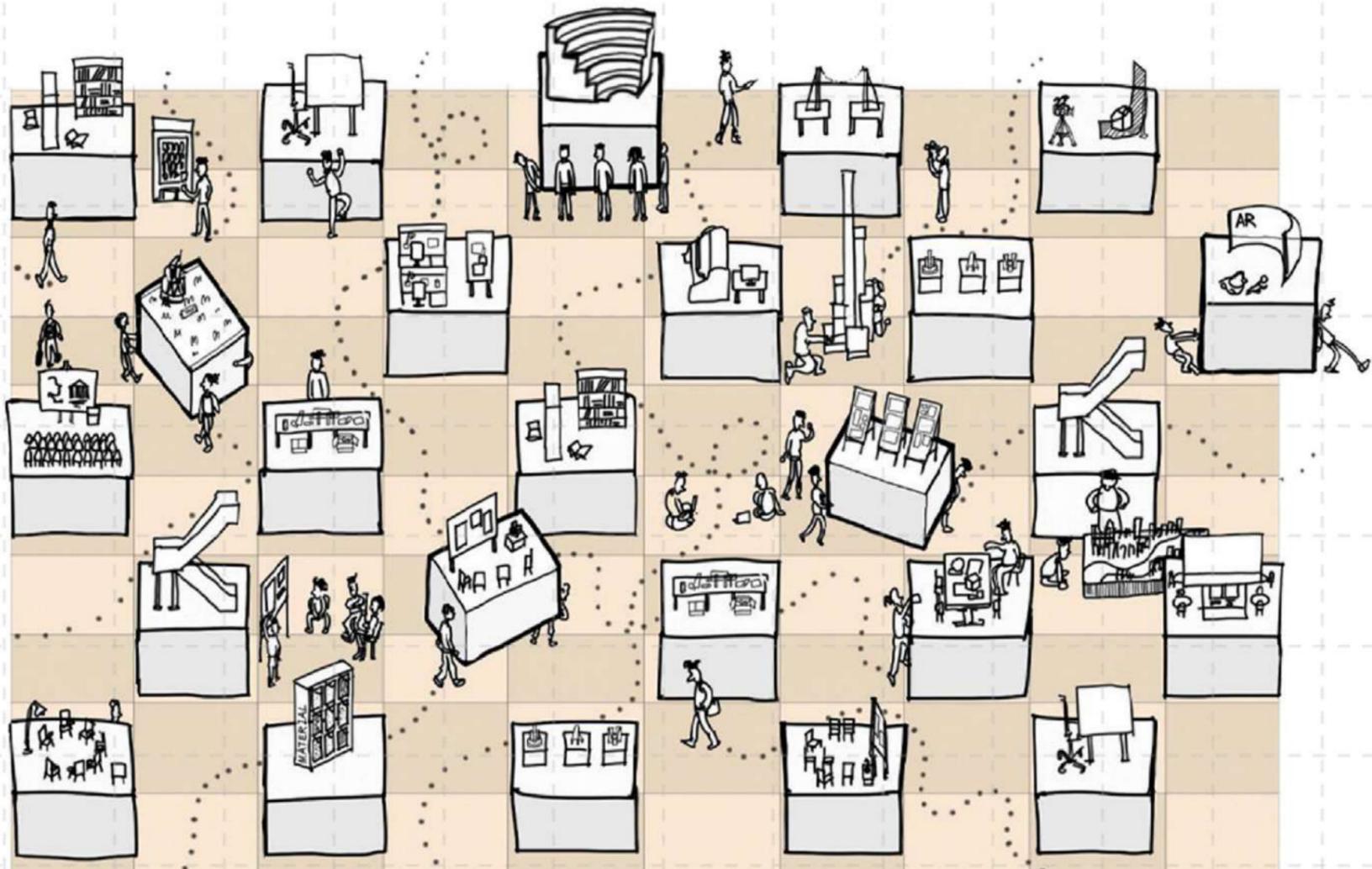
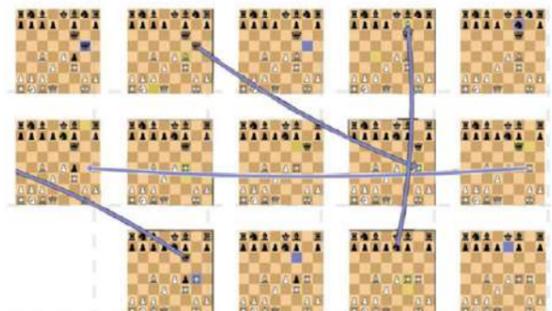
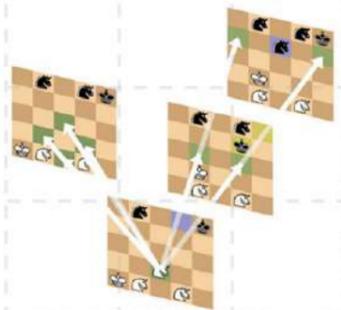


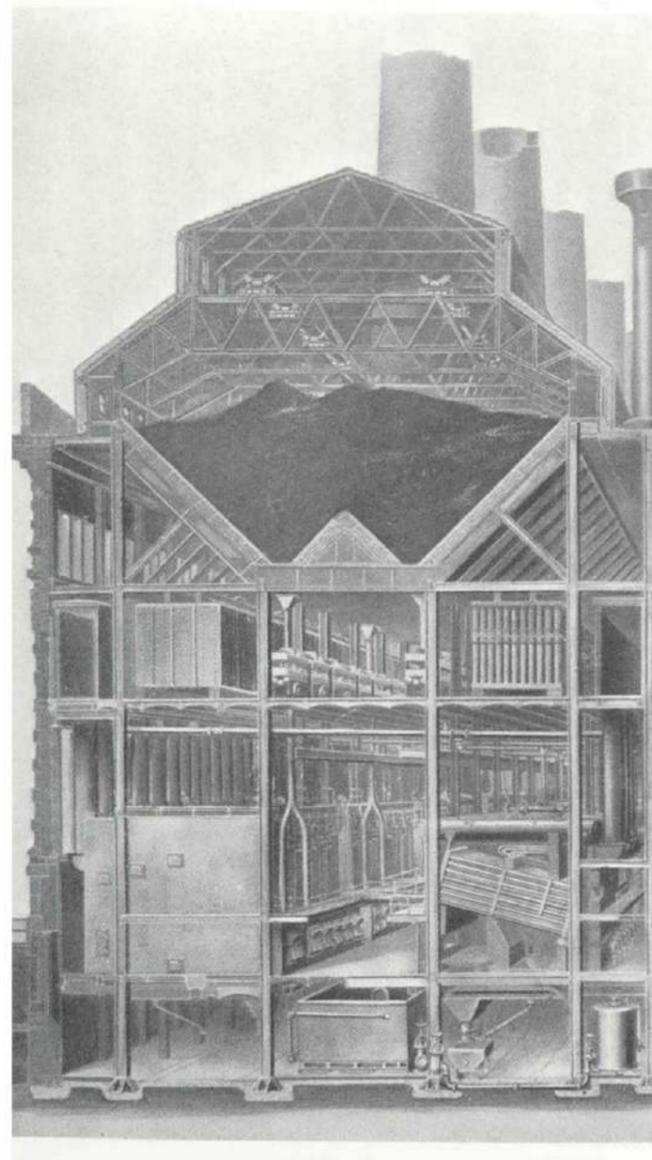
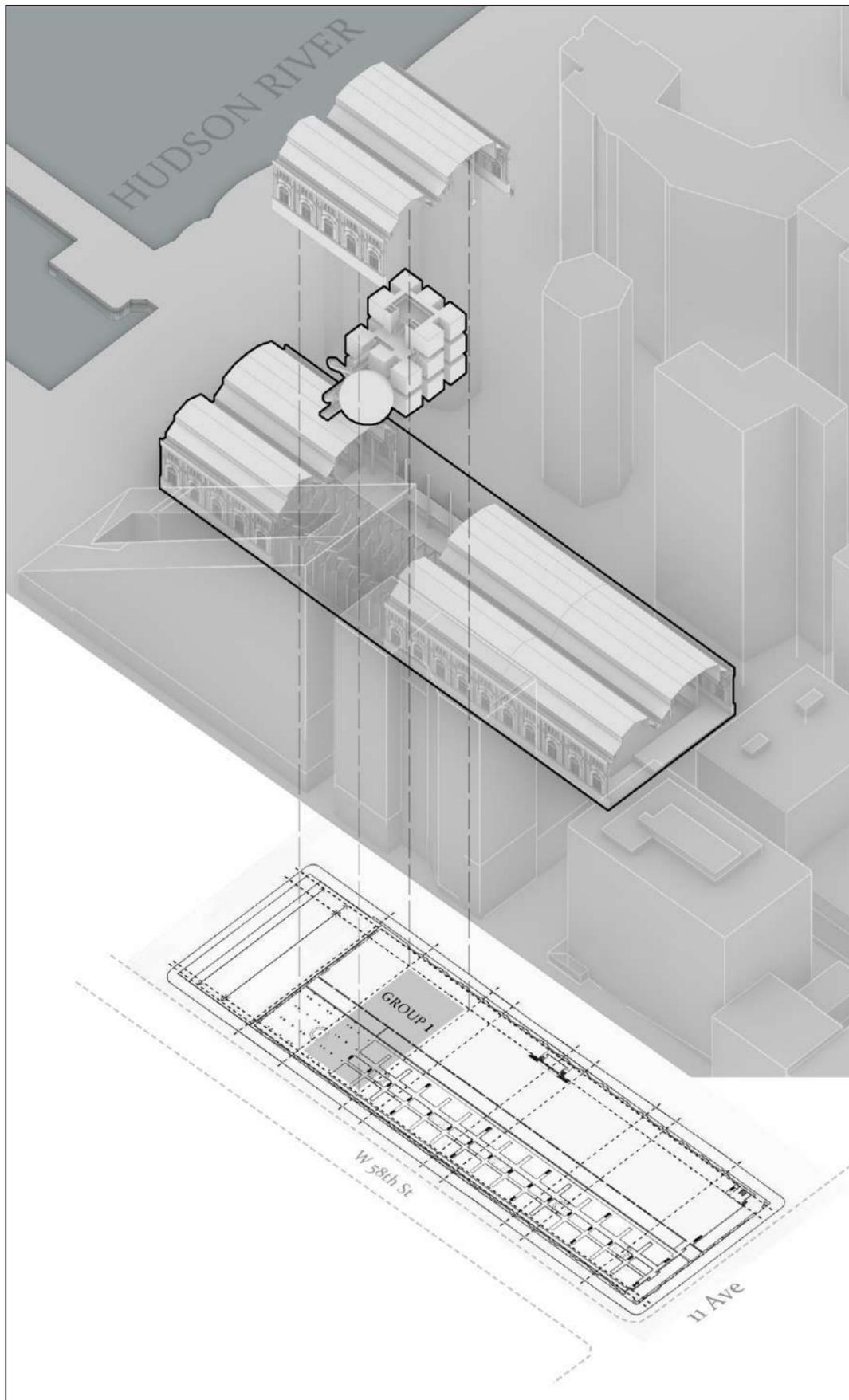
NARRATIVE VISUALIZATION 05



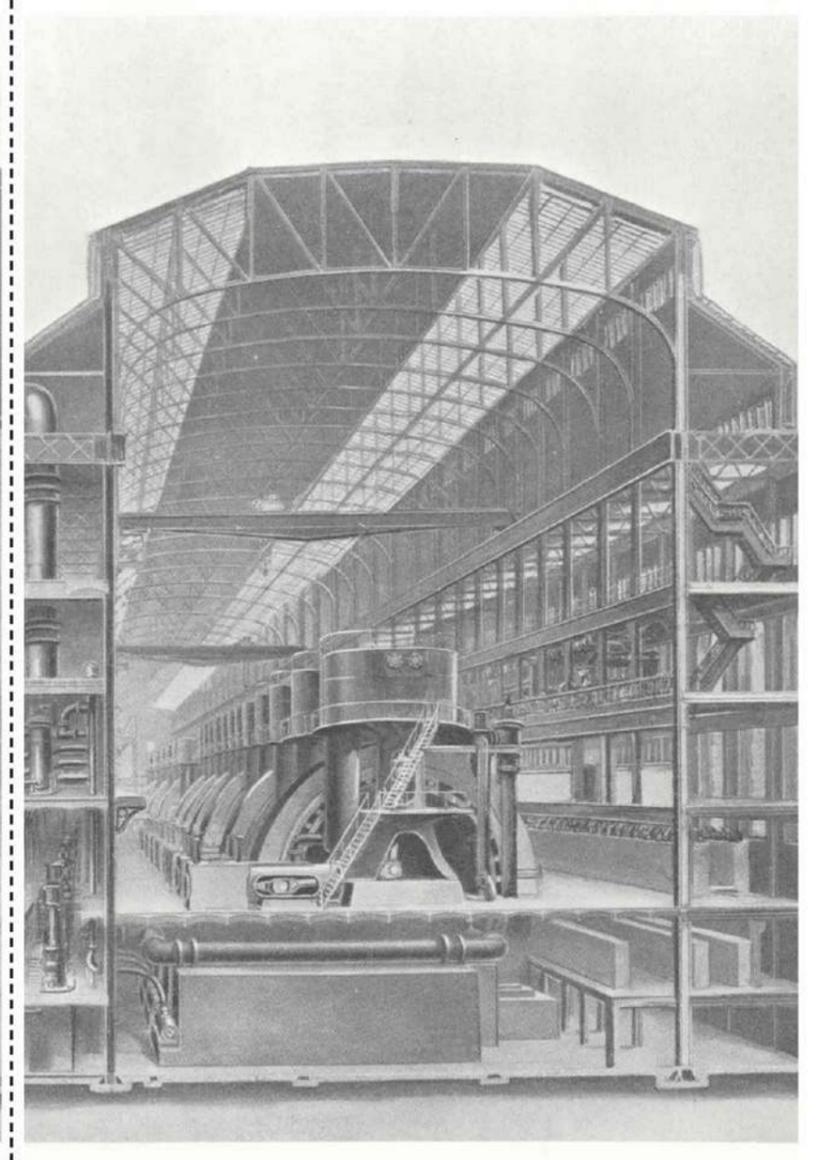
02 [The Expected Unexpected]

[LOCATION] MANHATTAN, NY
[ACADEMIC] 2022 FALL, ADV STUDIO
[INSTRUCTOR] BERNARD TSCHUMI
[COLLABORATOR] NAN WEI, HUAN PENG LI





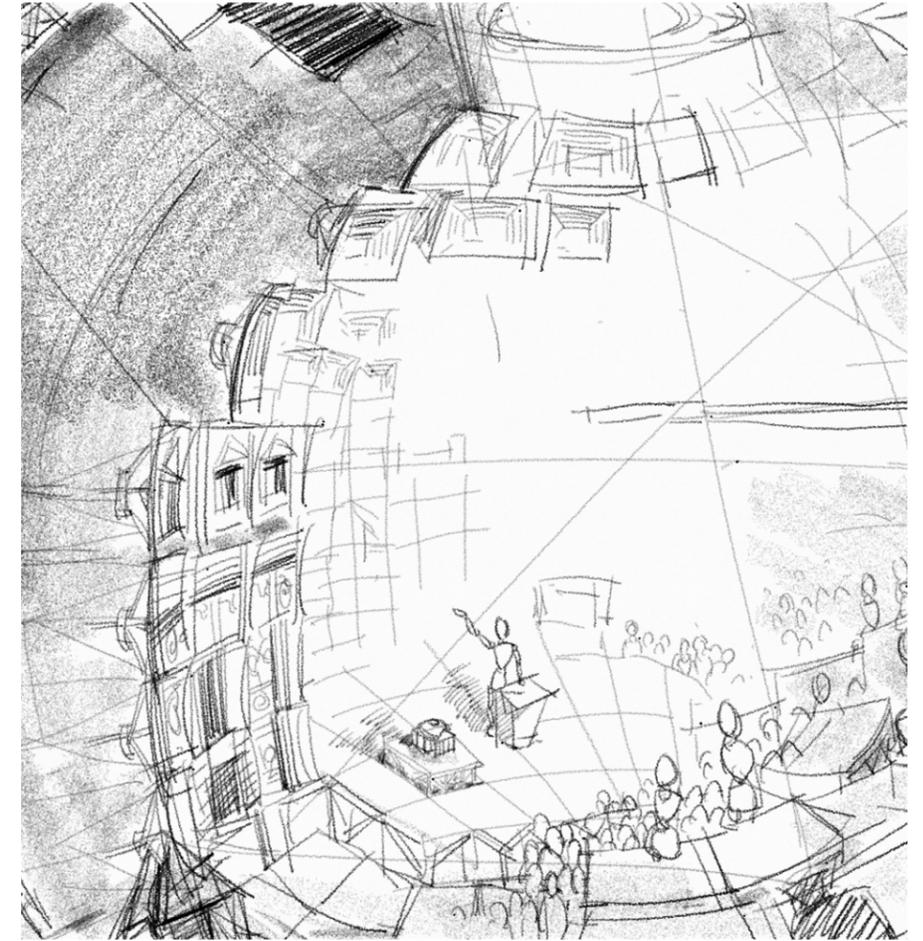
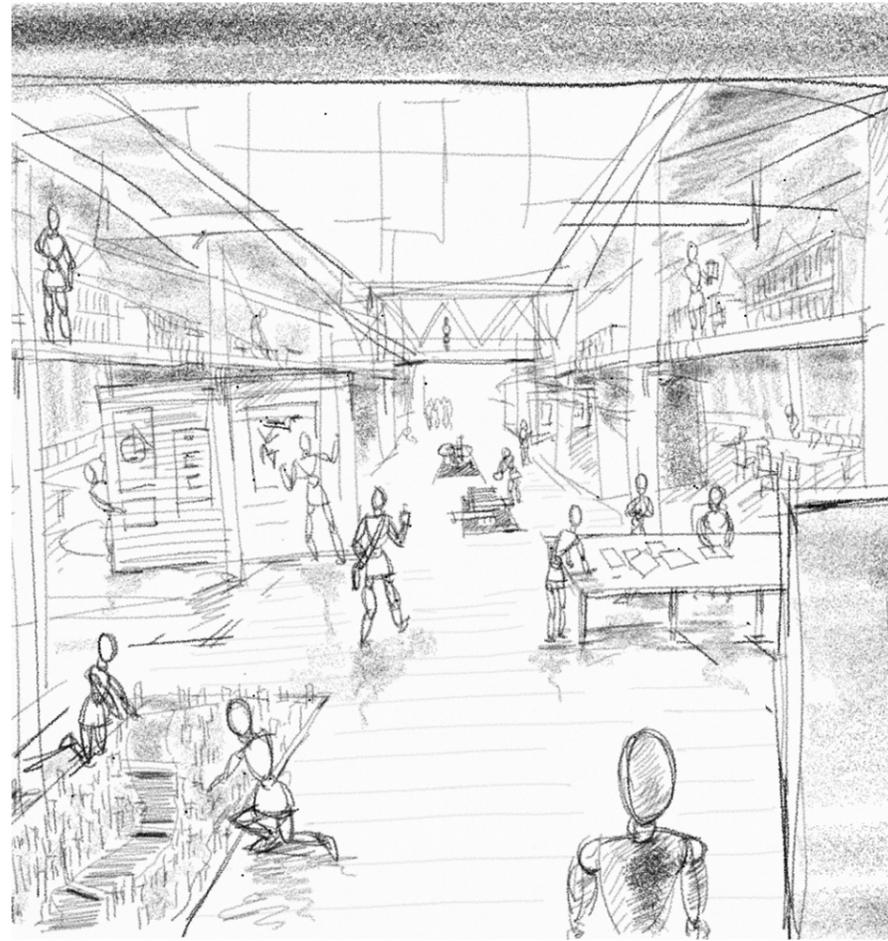
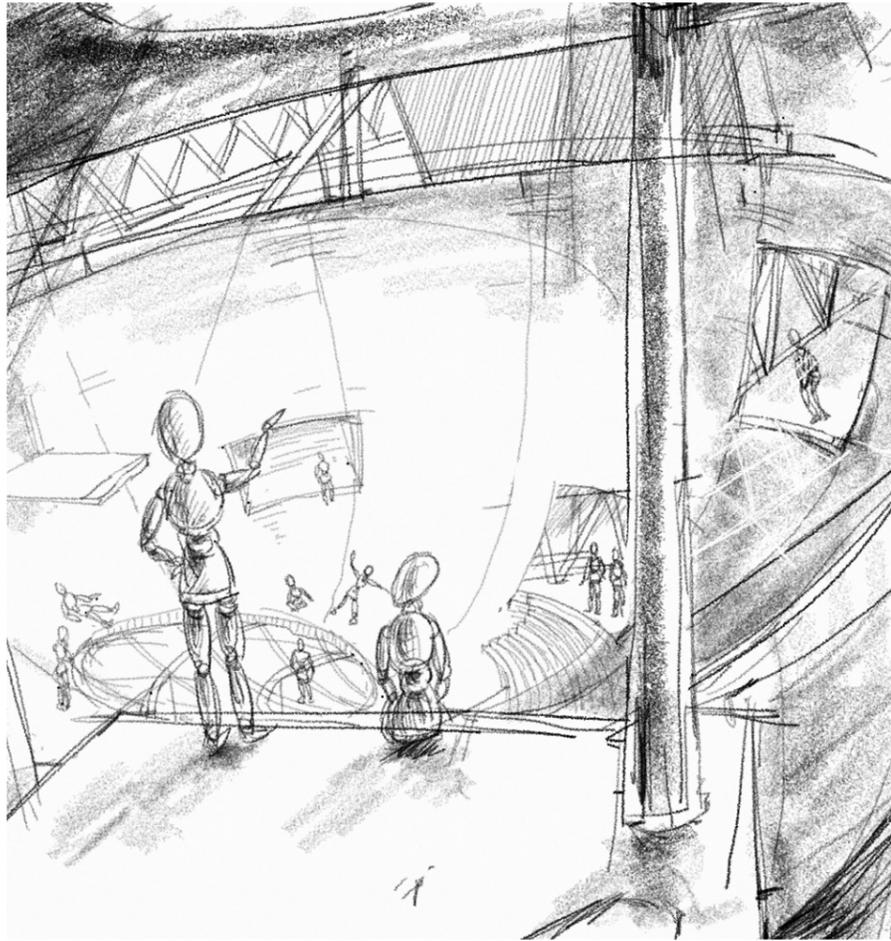
Dense structures (left)



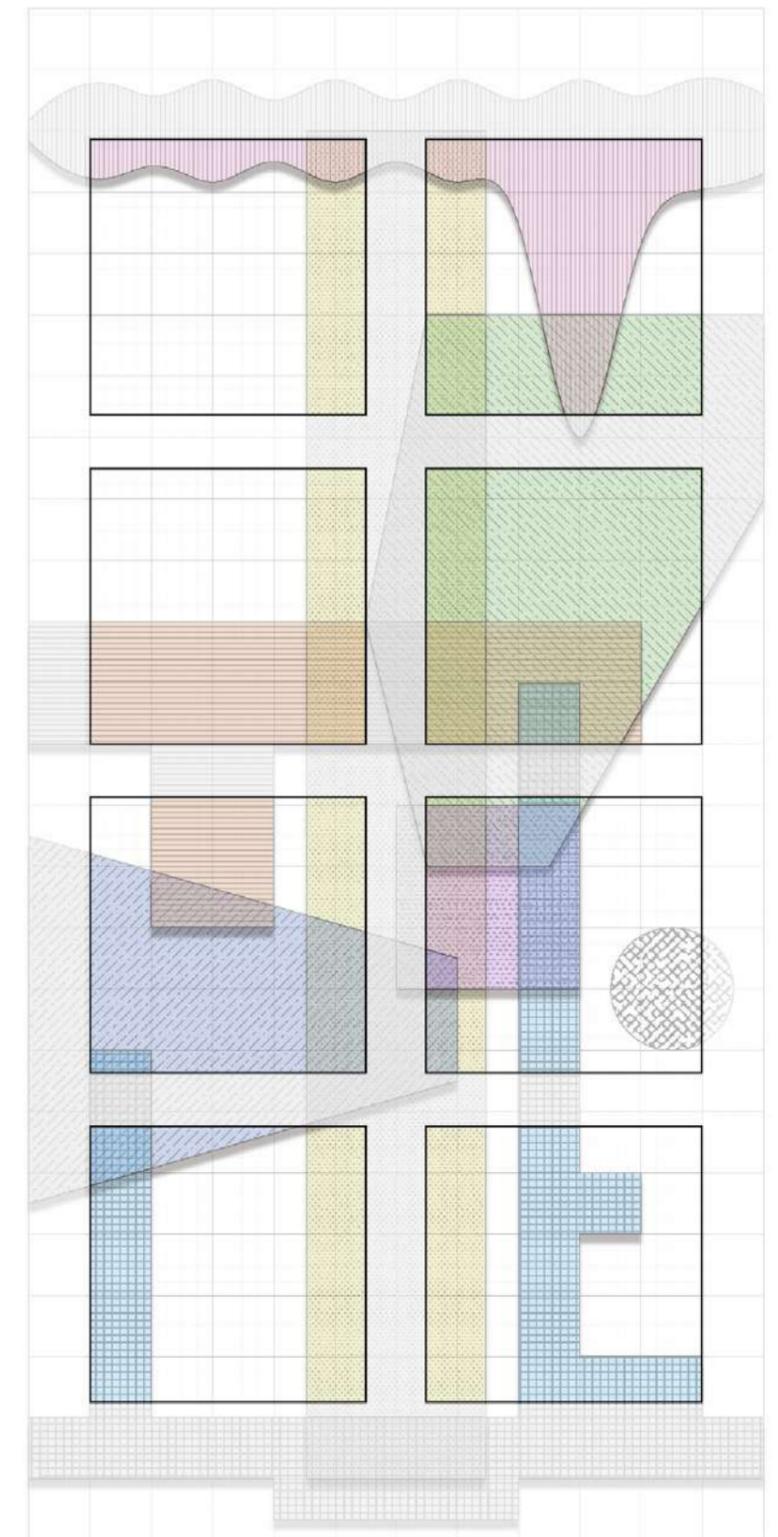
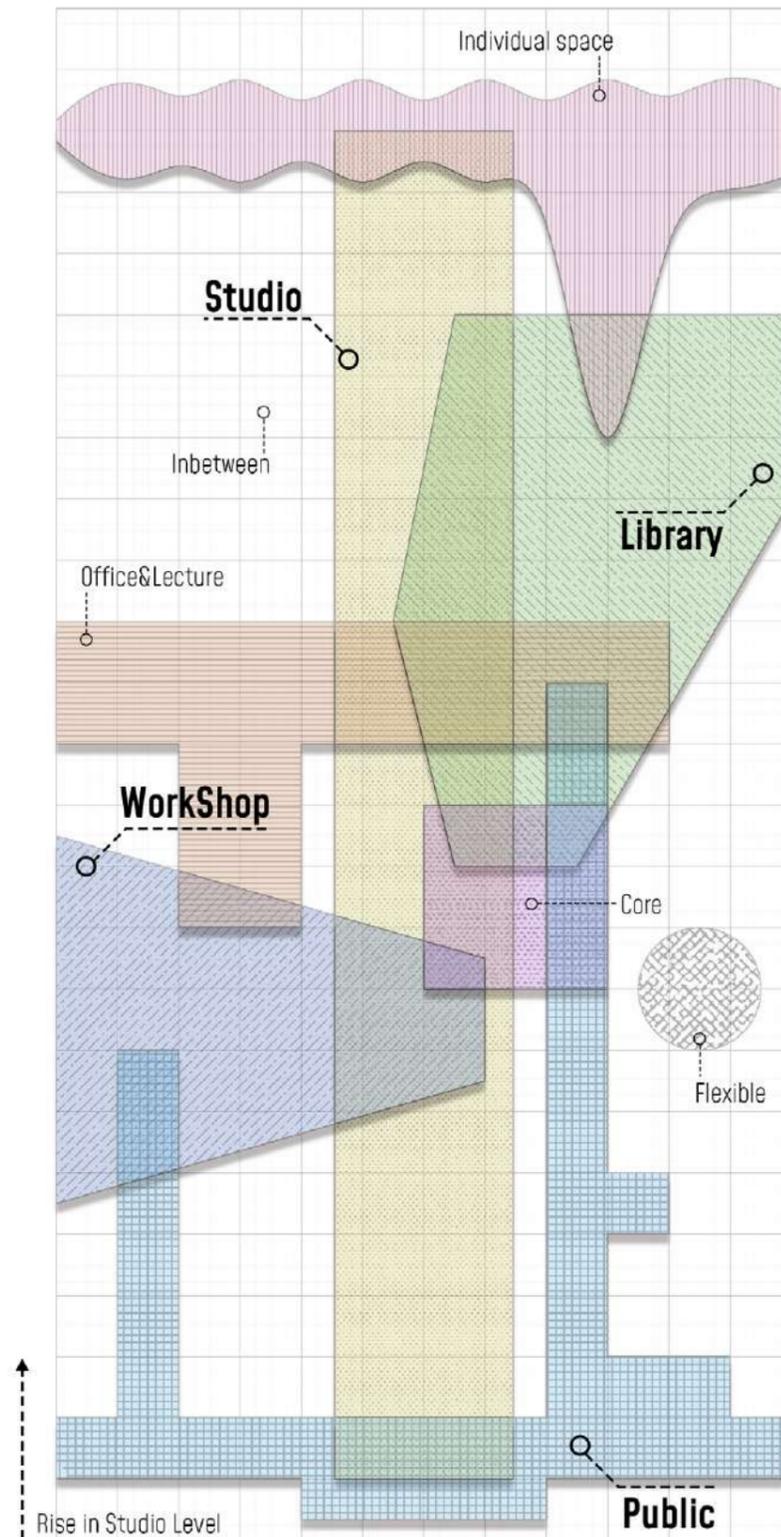
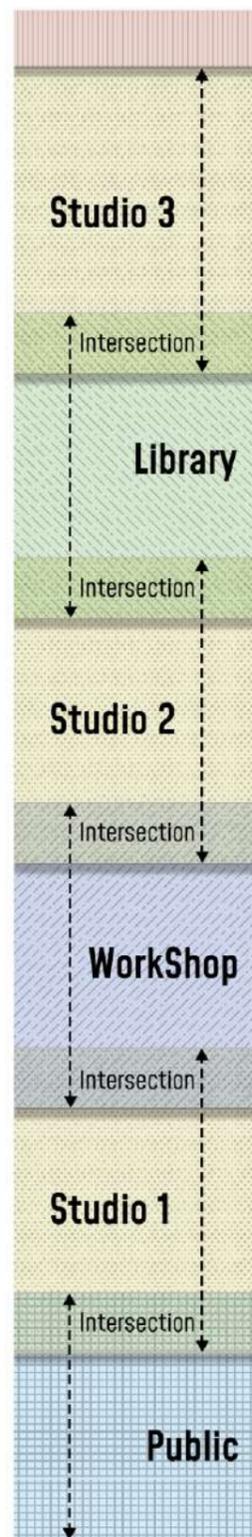
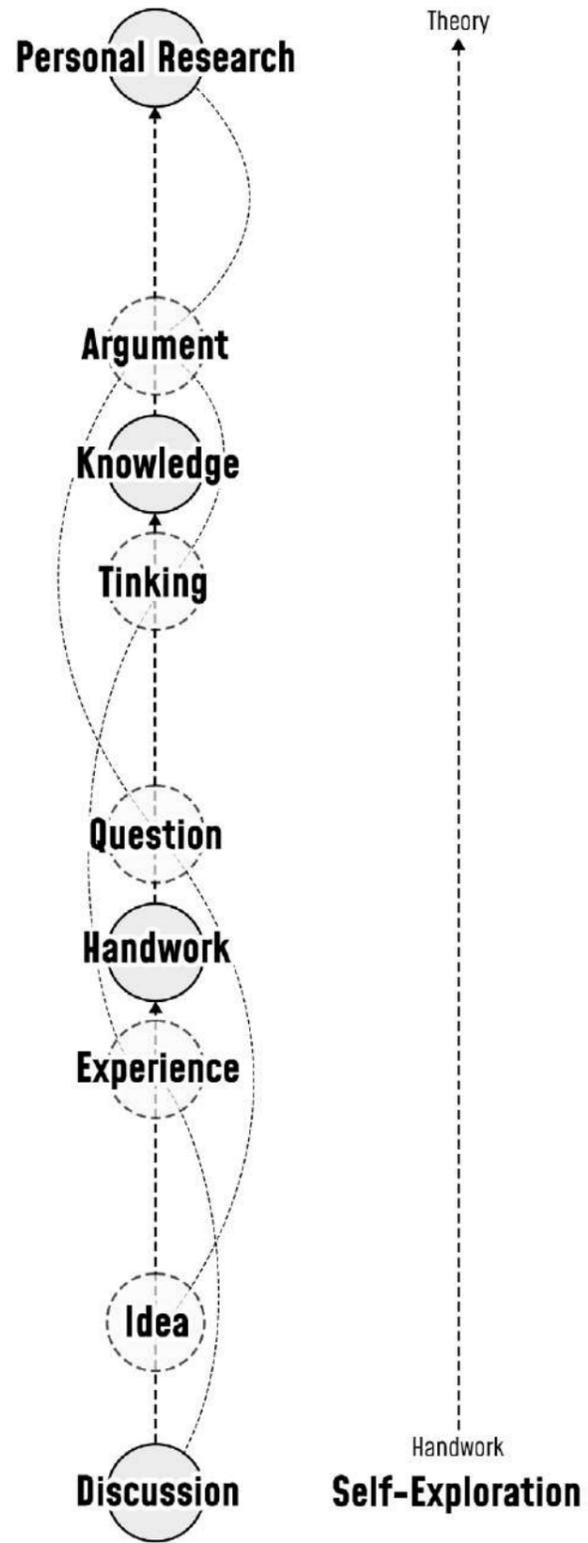
Free zone (right)

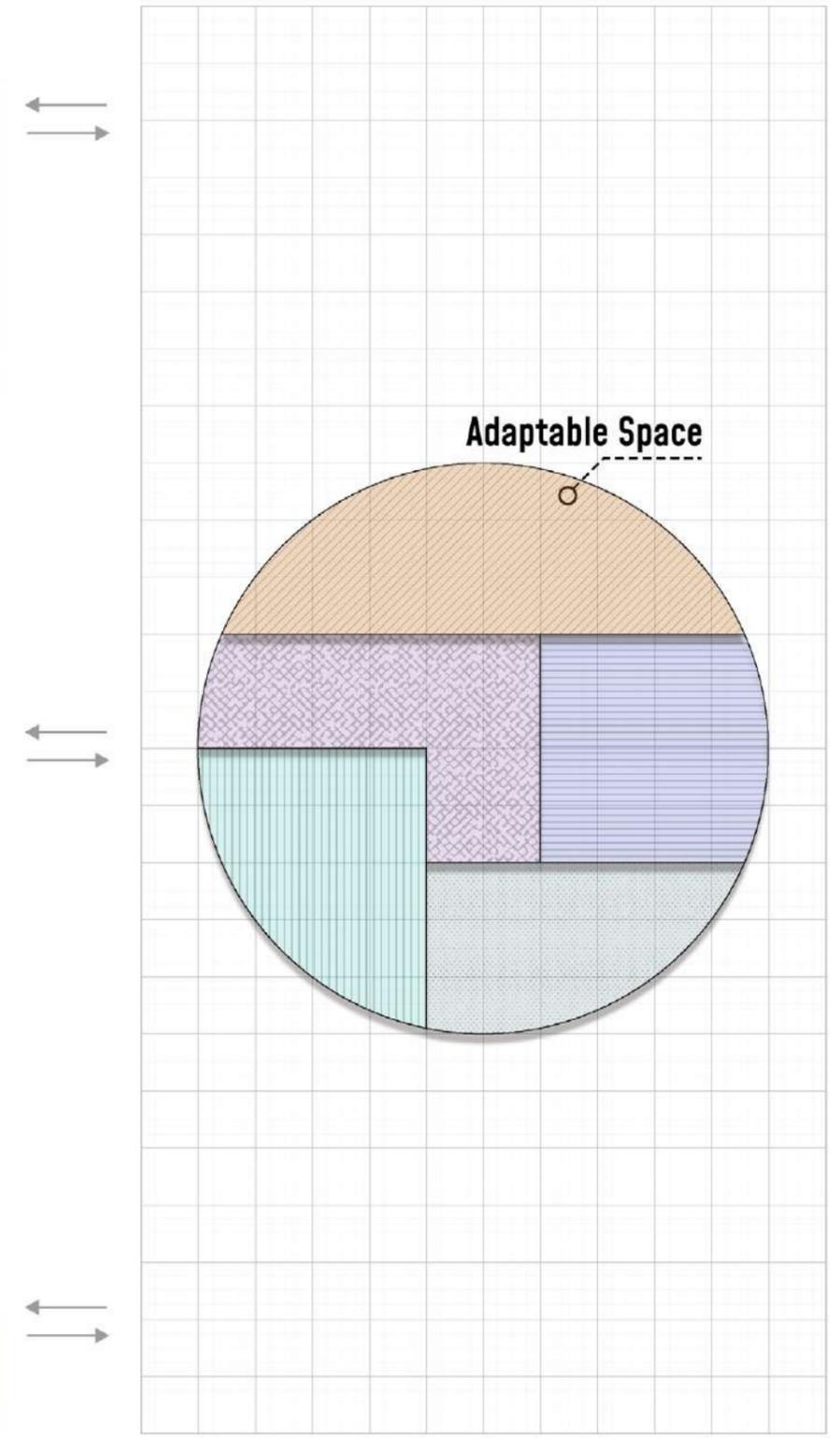
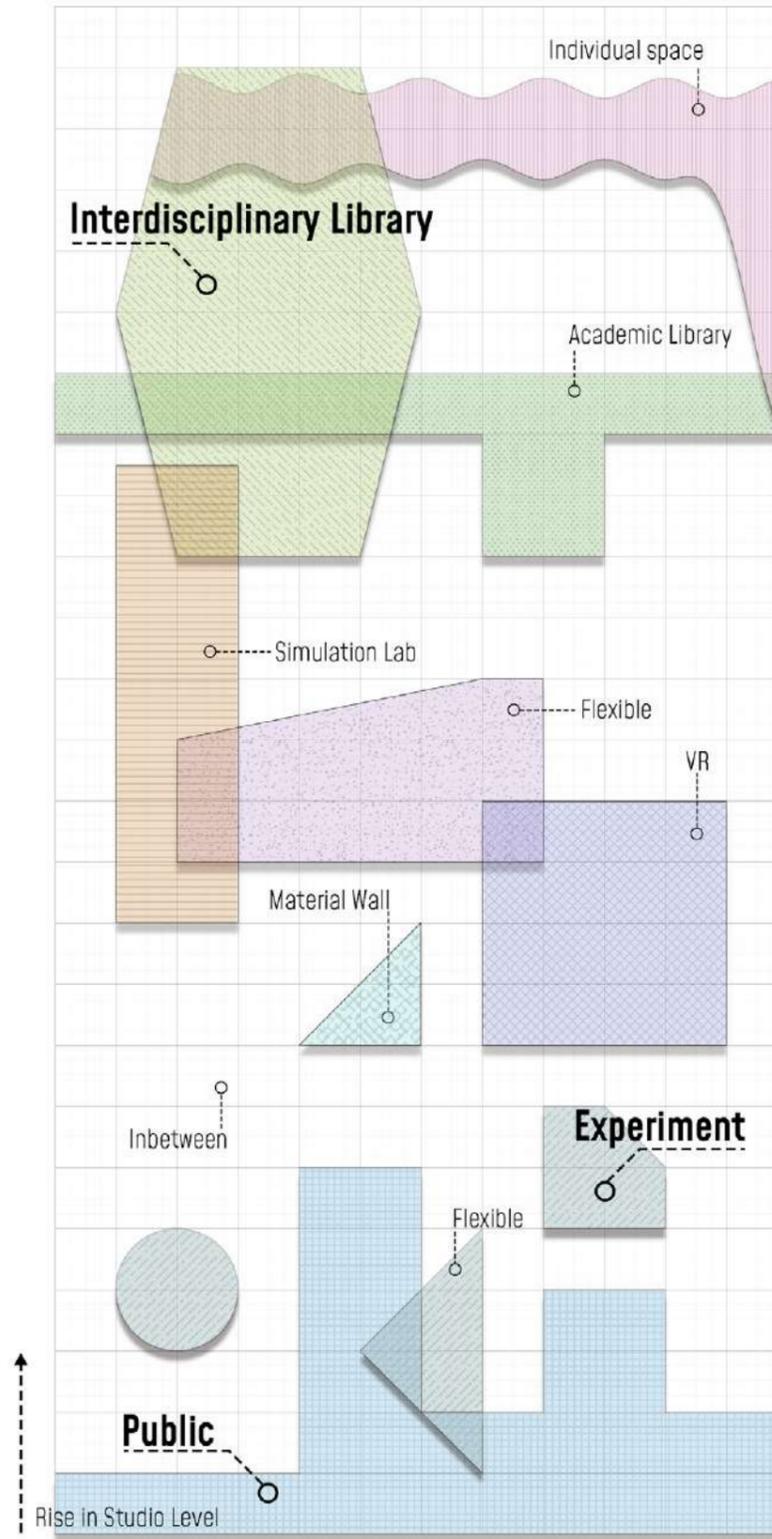
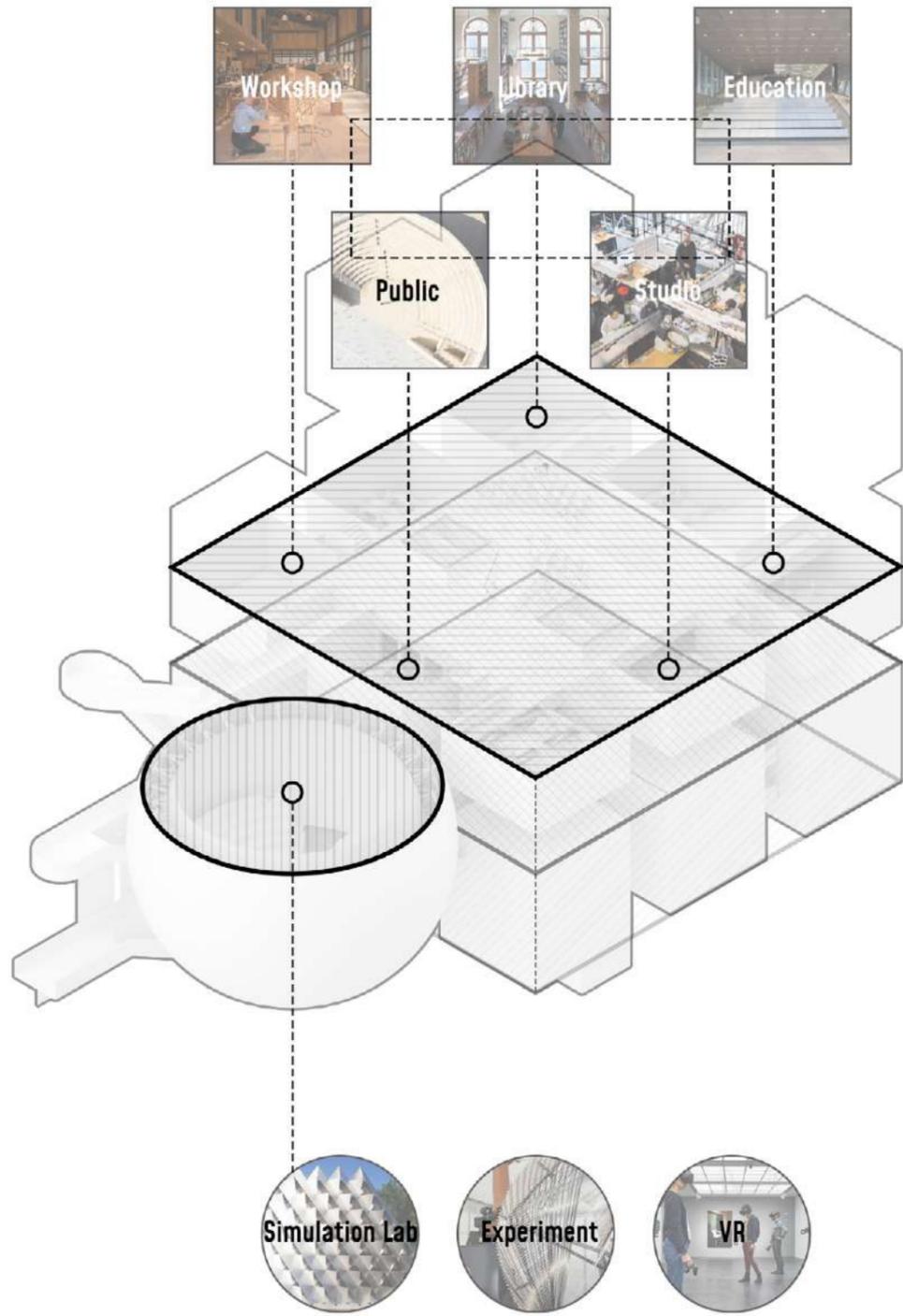


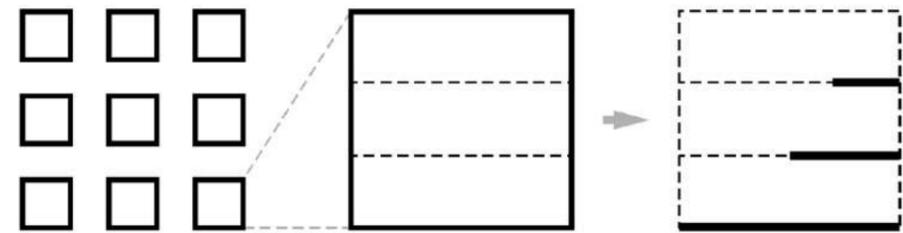
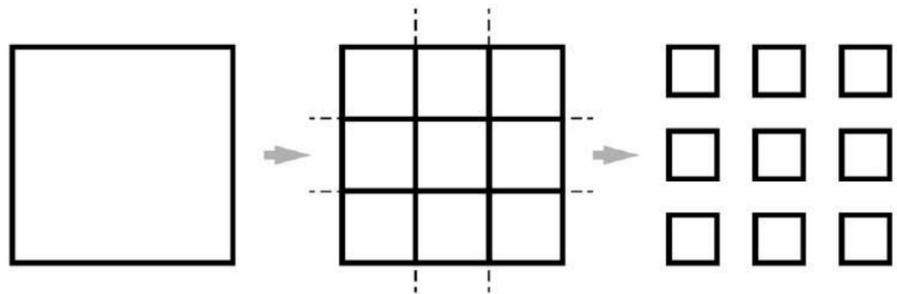
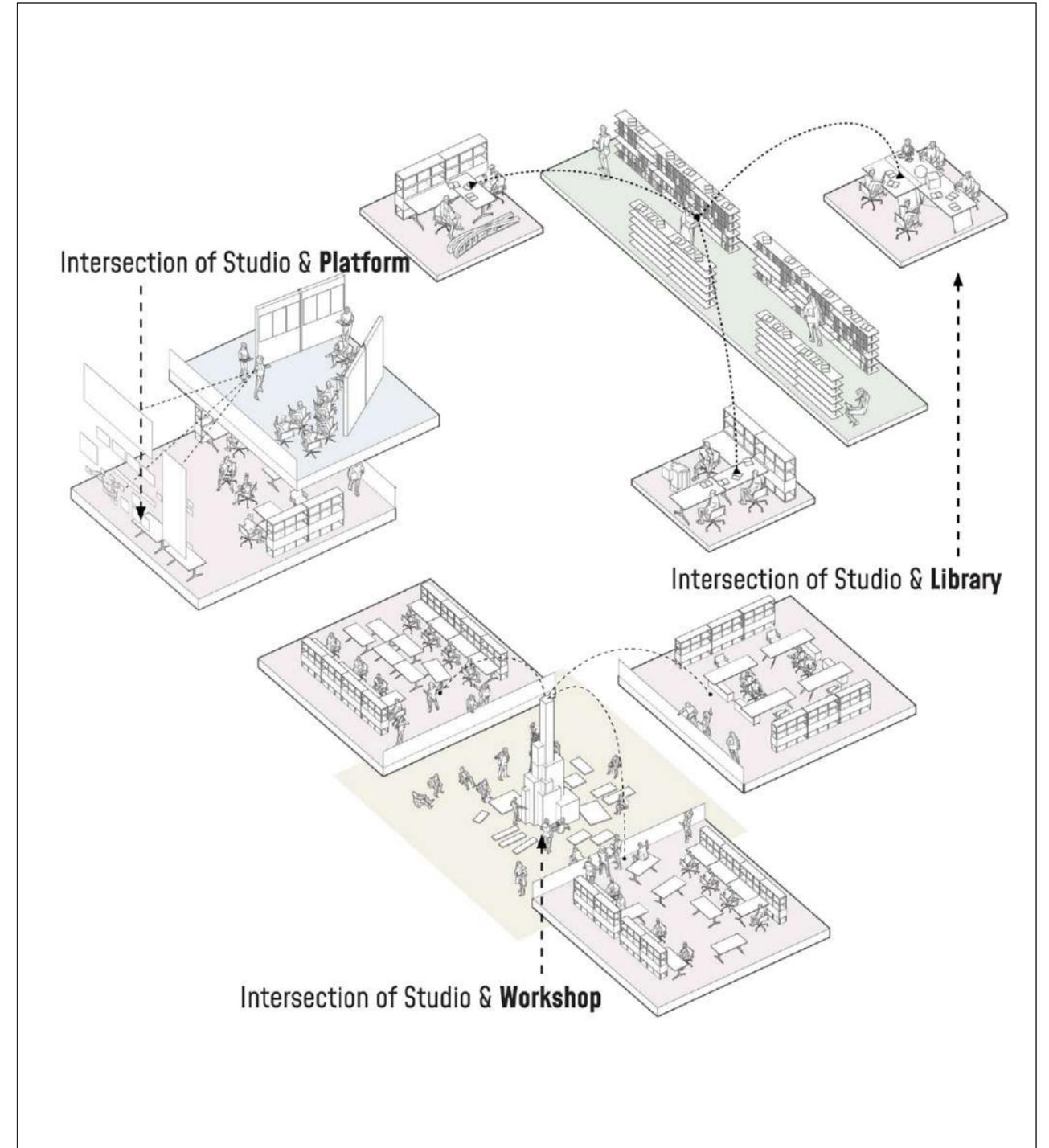
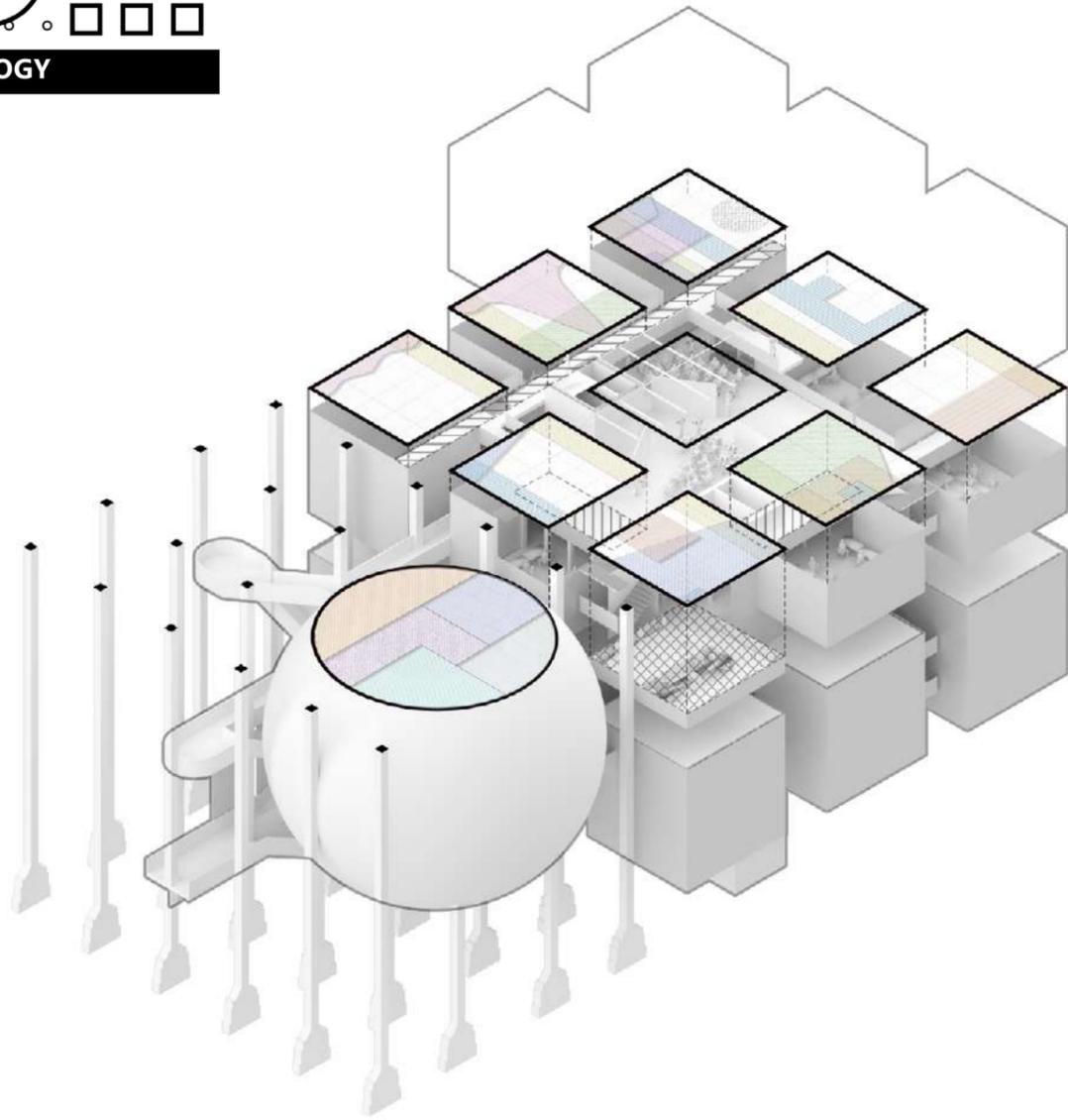
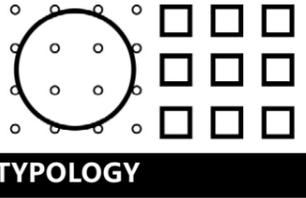
PROGRAM

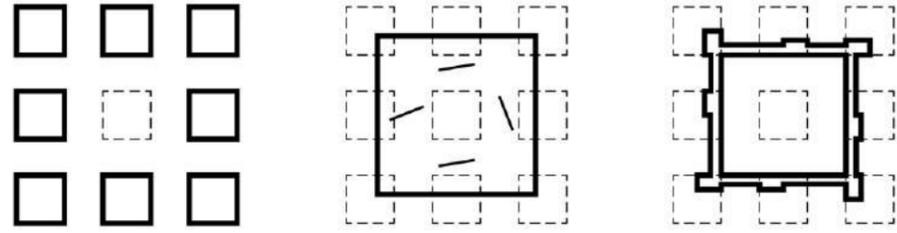
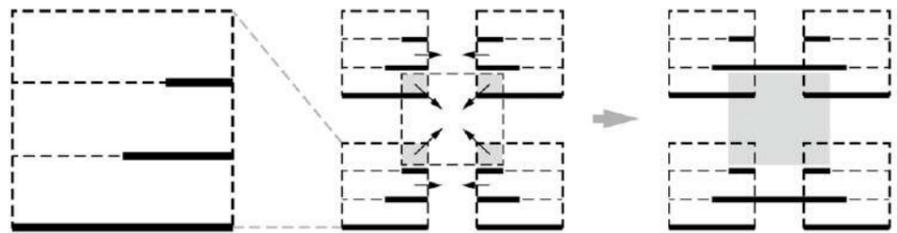
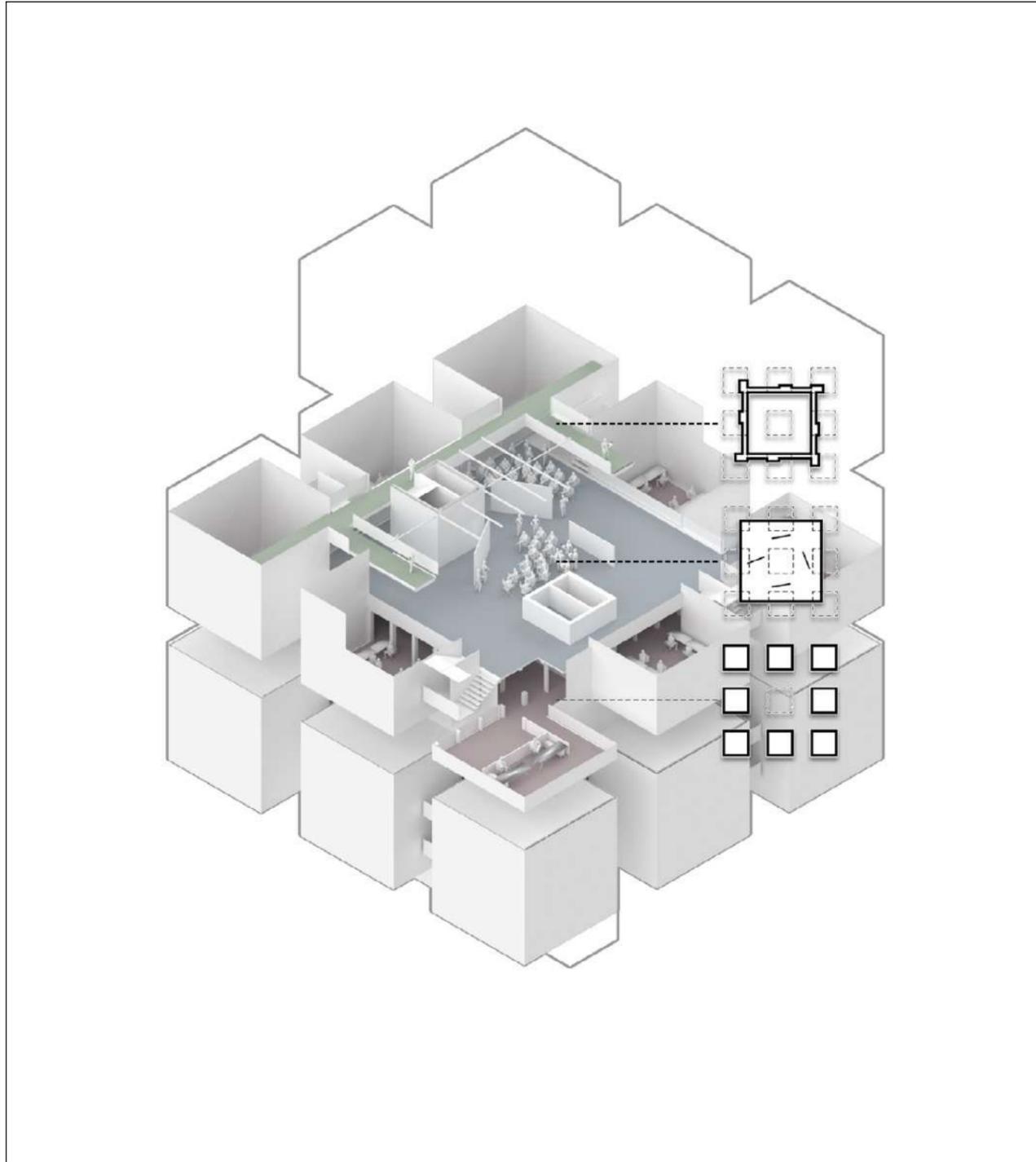
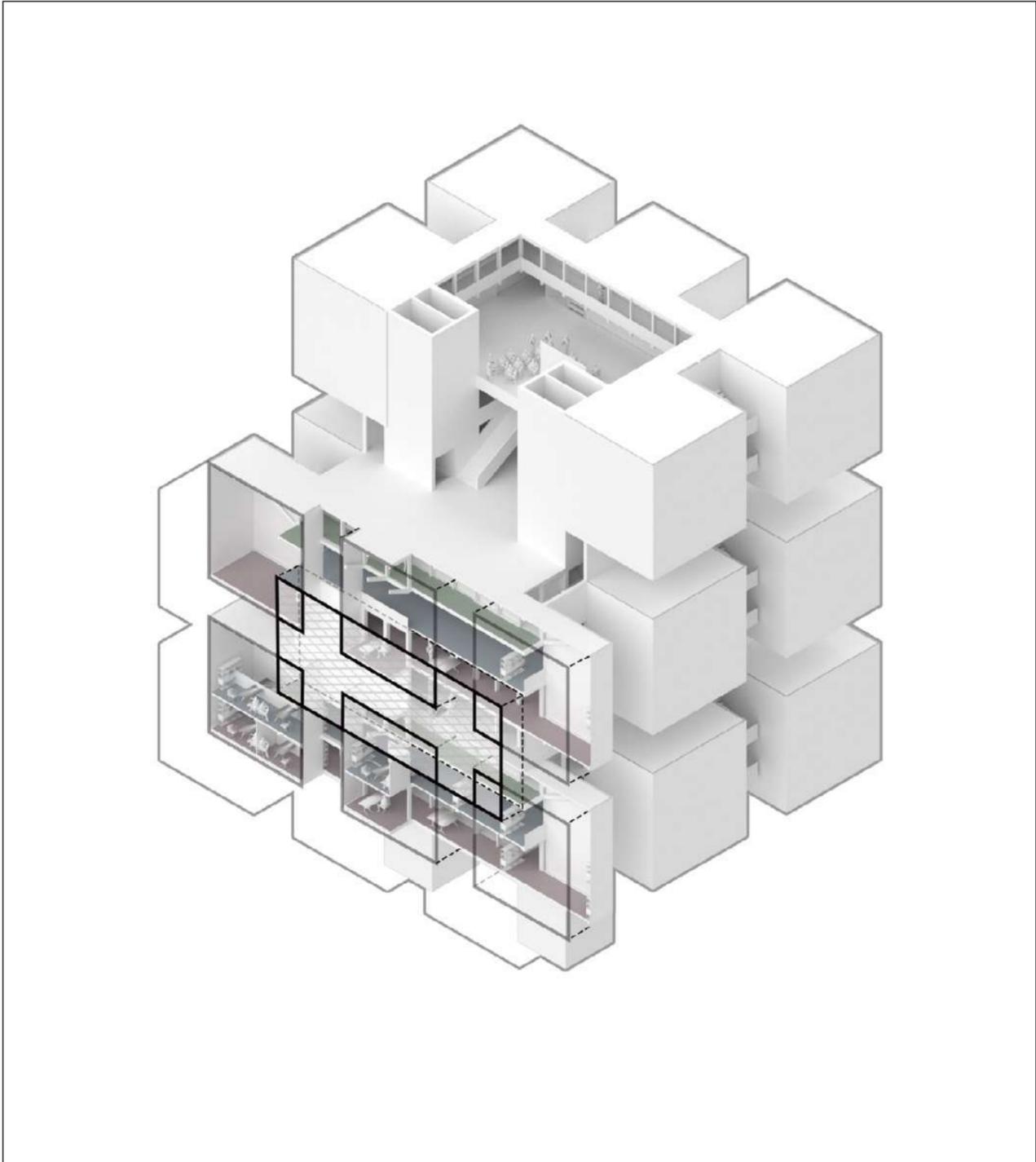


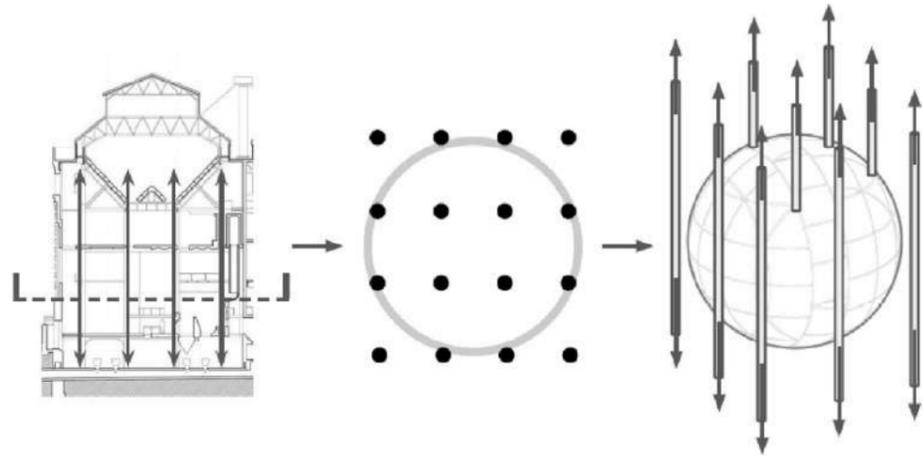
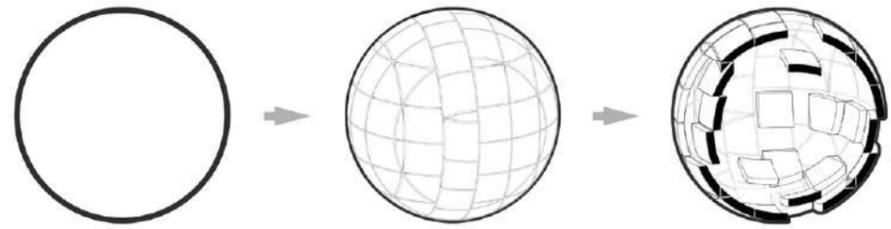
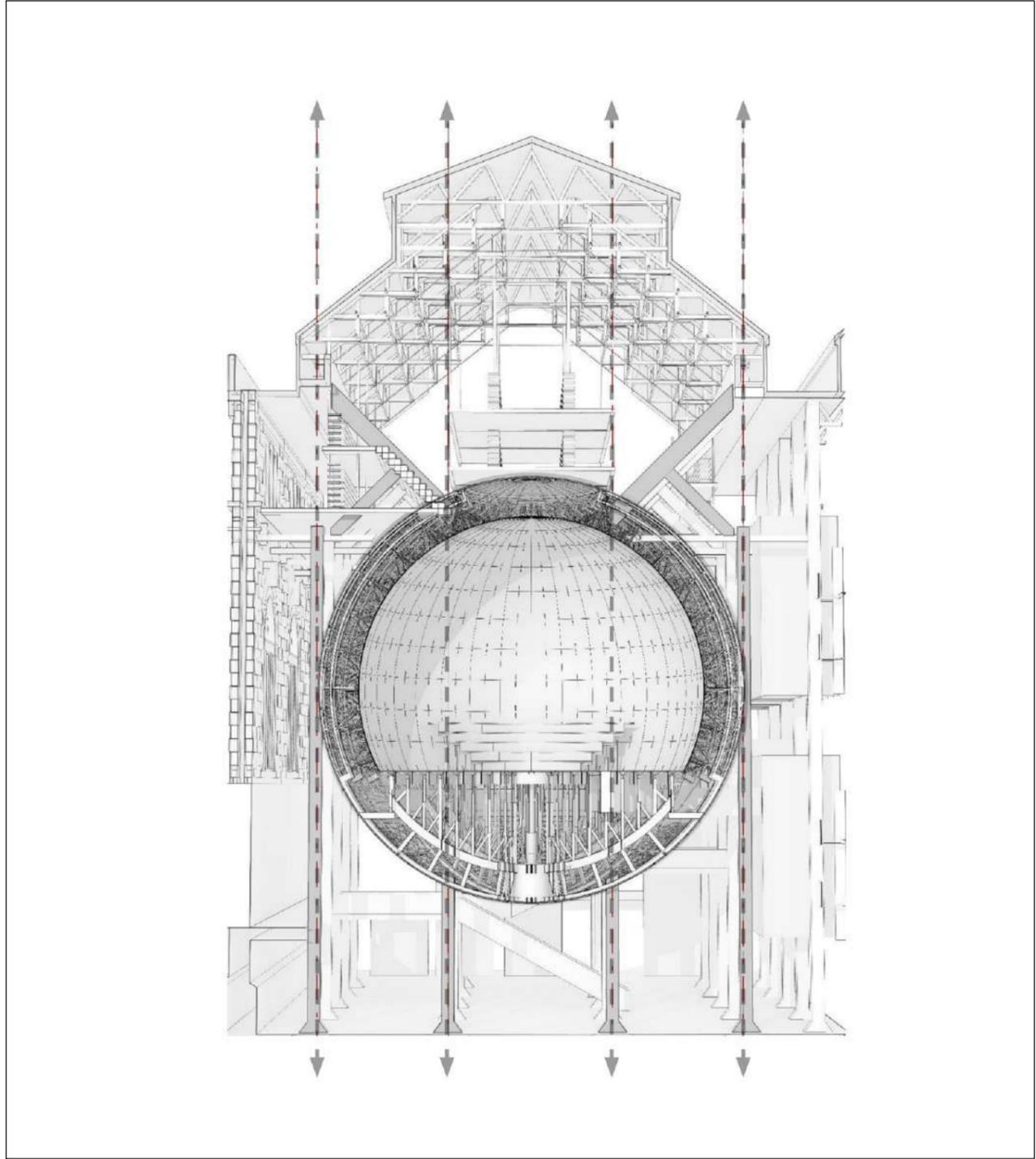
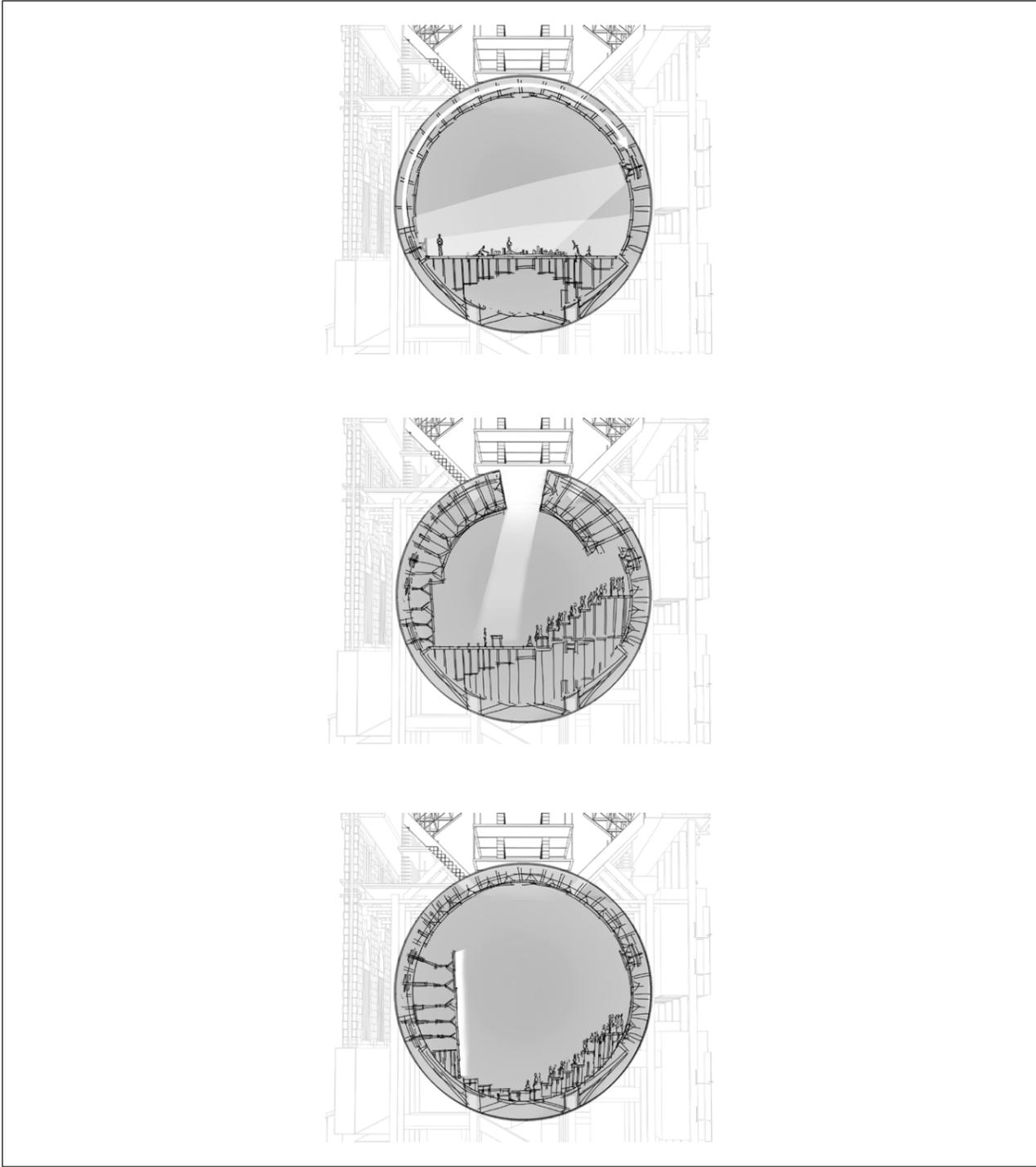
SKETCHES OF UNEXPECTED PROGRAMS





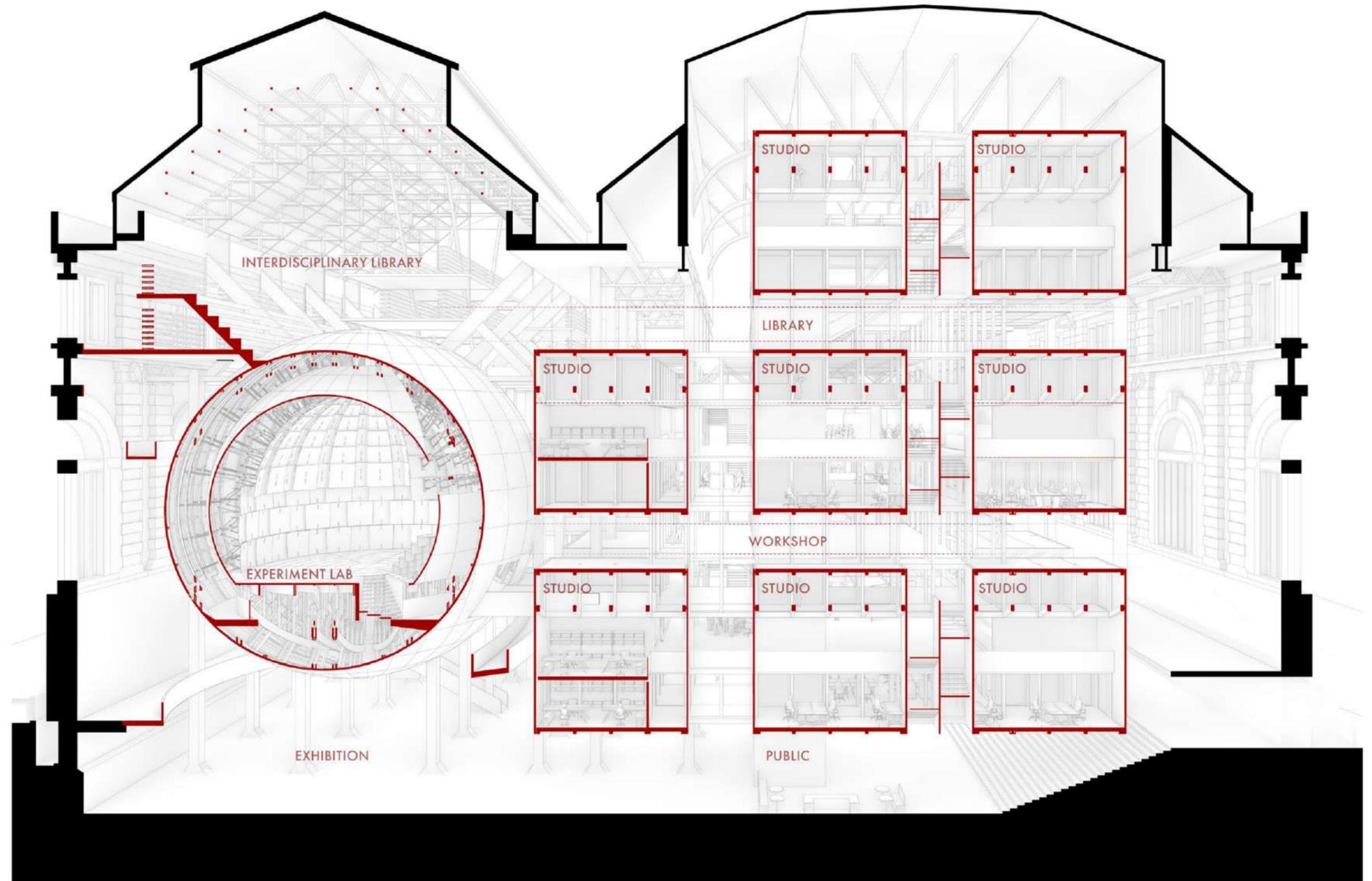
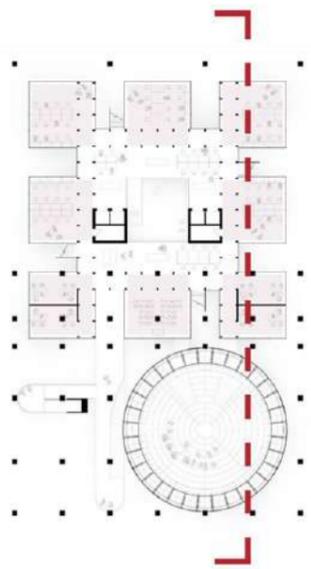


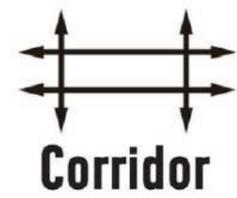
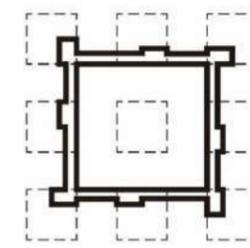
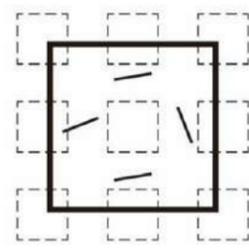
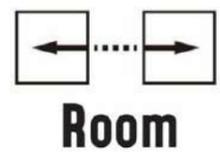
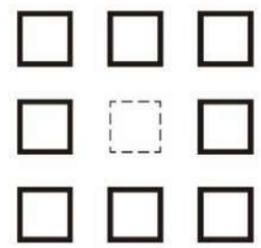
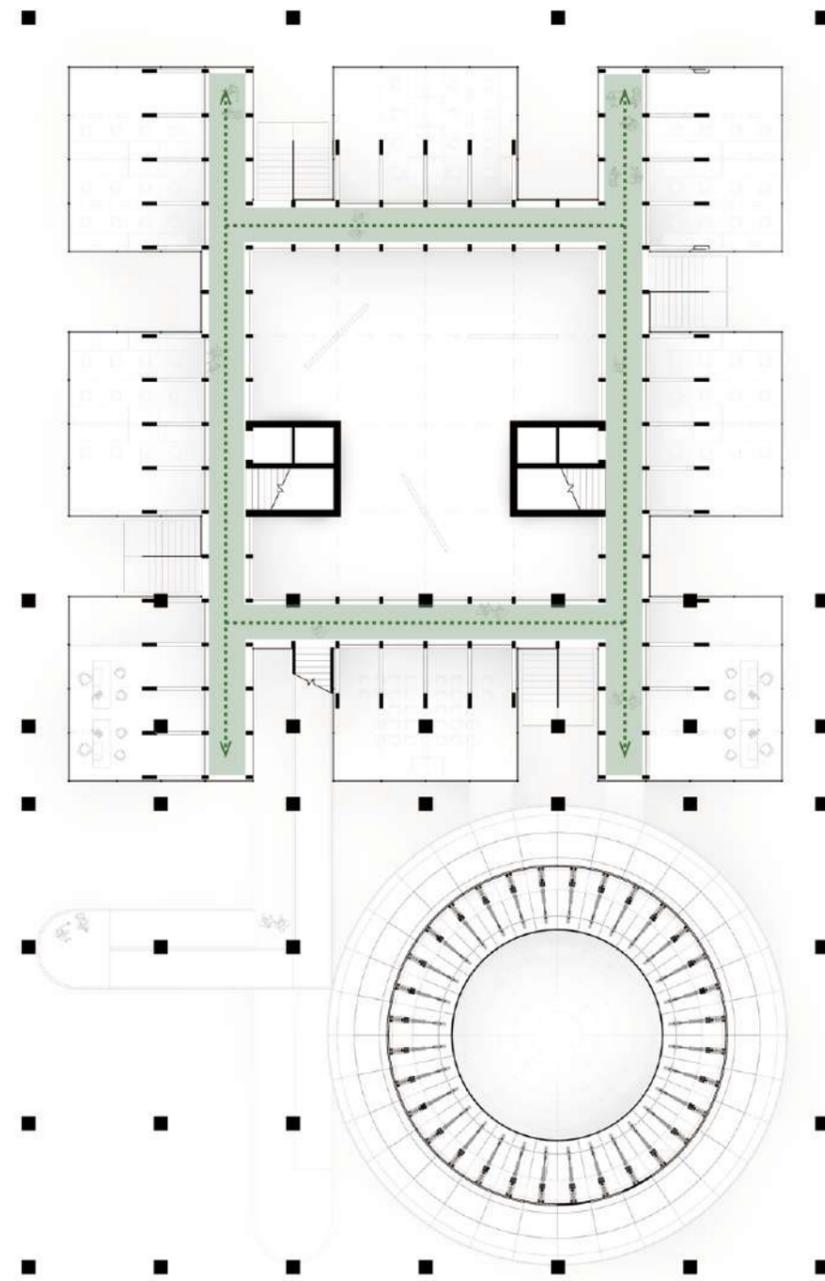
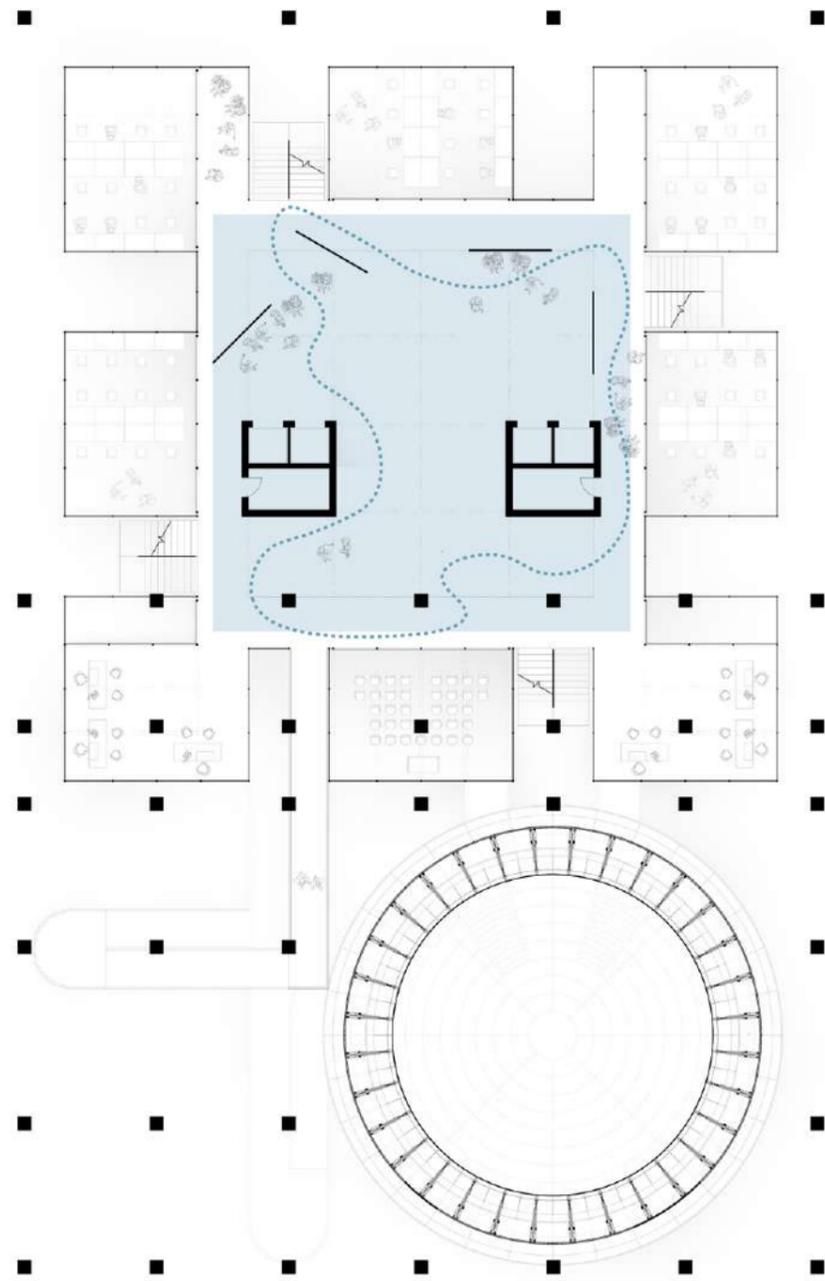
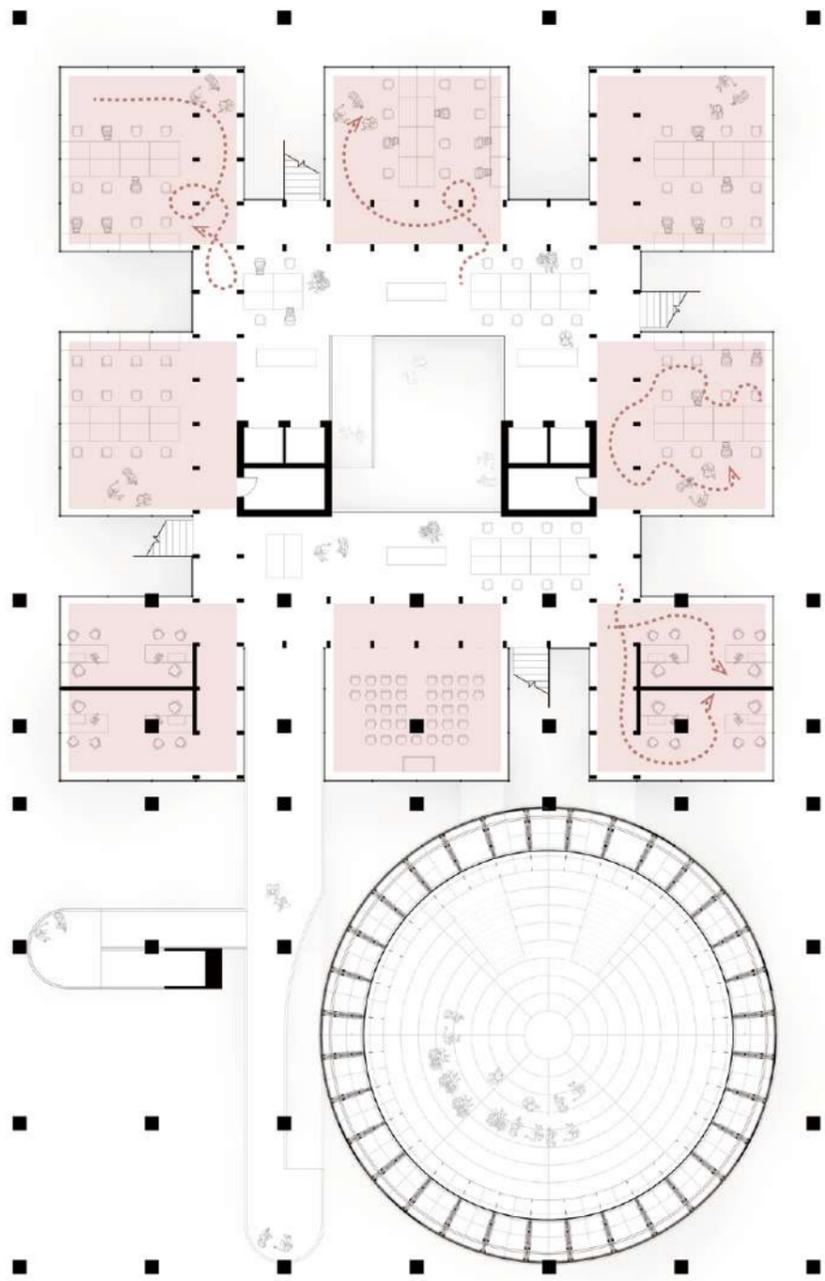


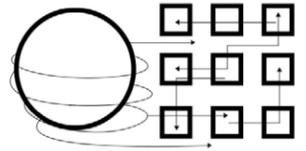


Typology

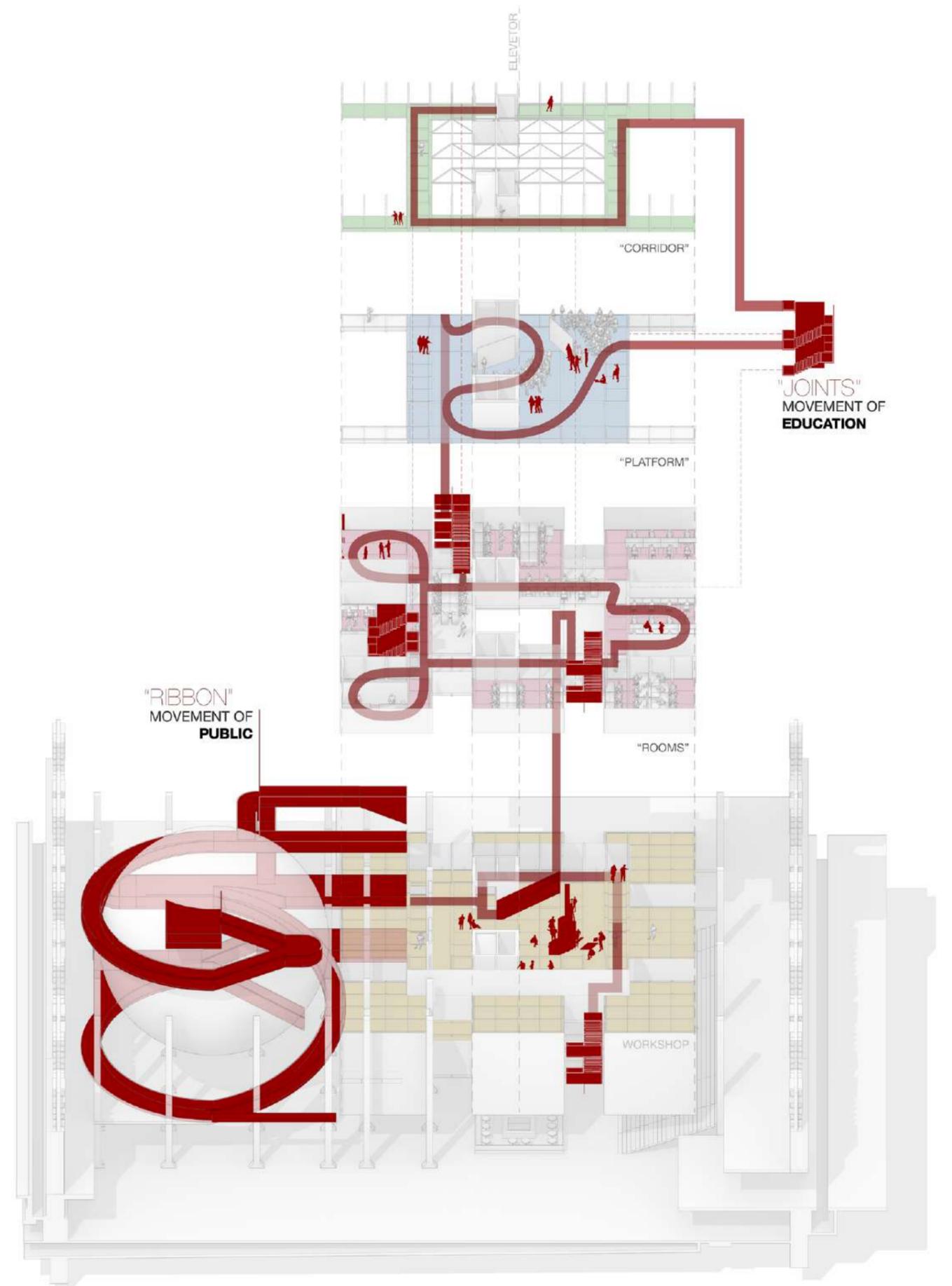
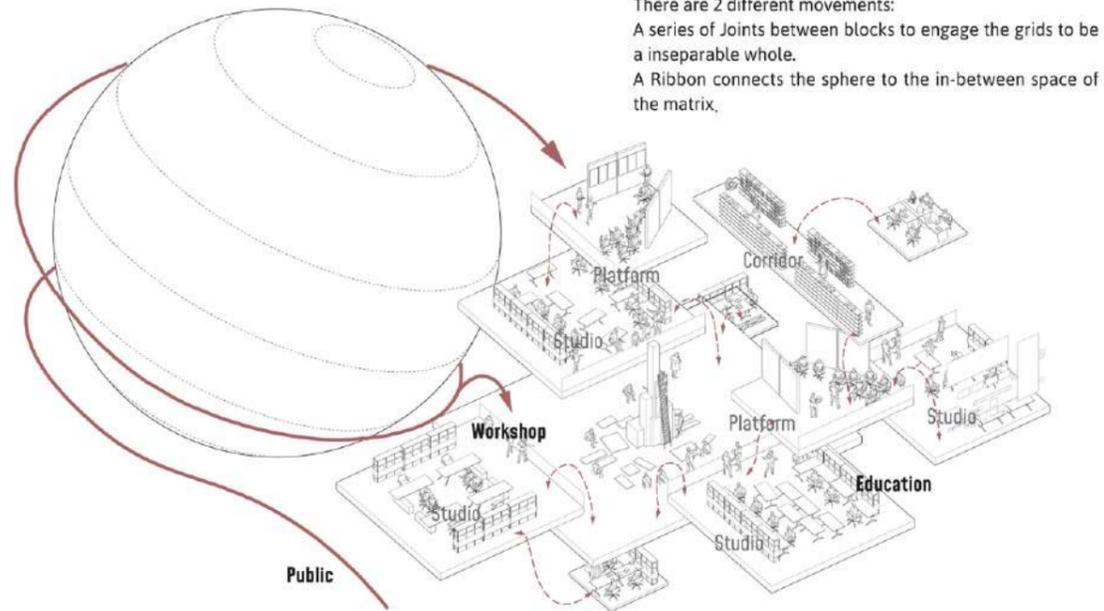
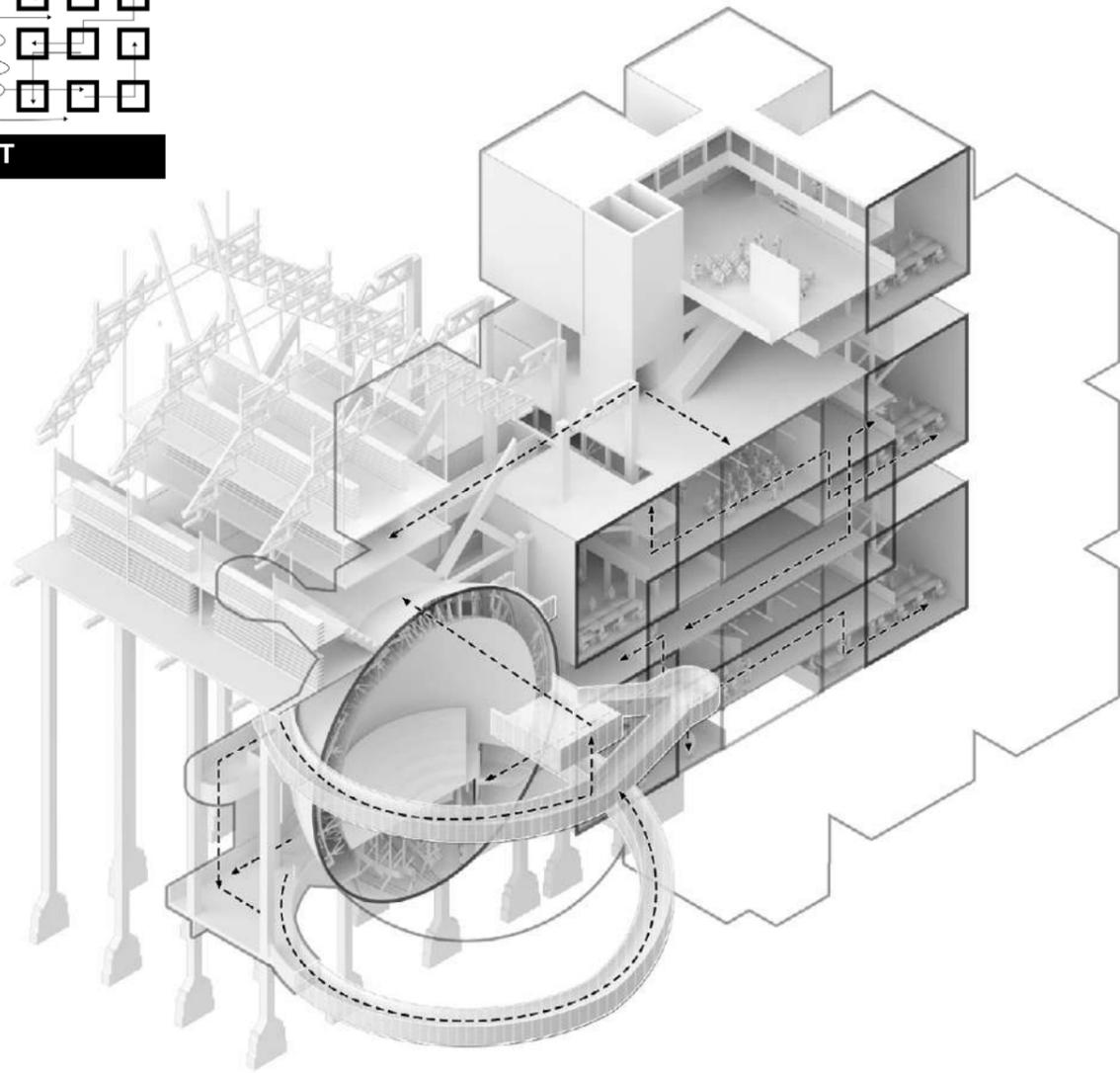
Combining two types of typology will bring infinite possibilities to this project; they cross and fuse.





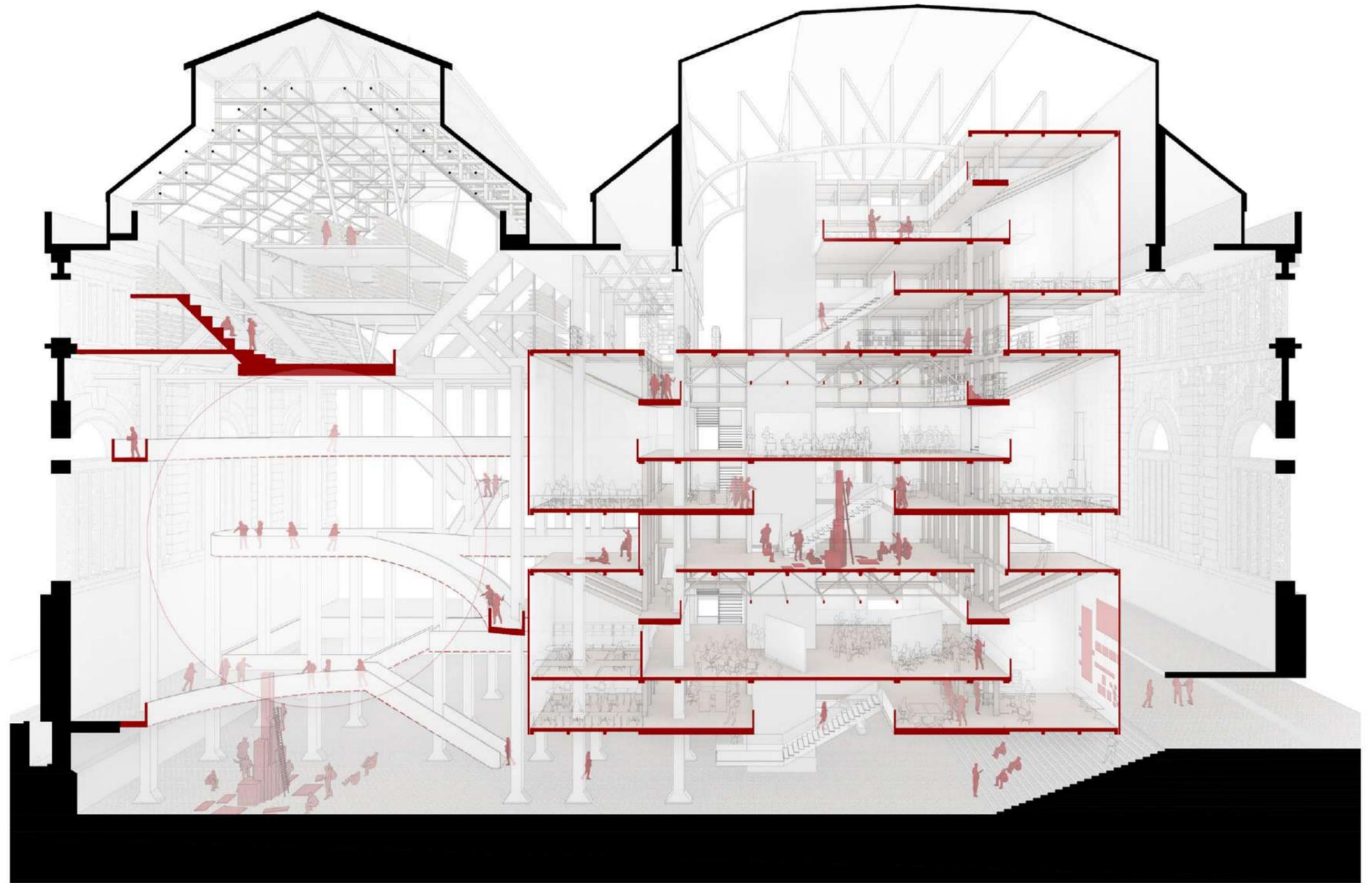
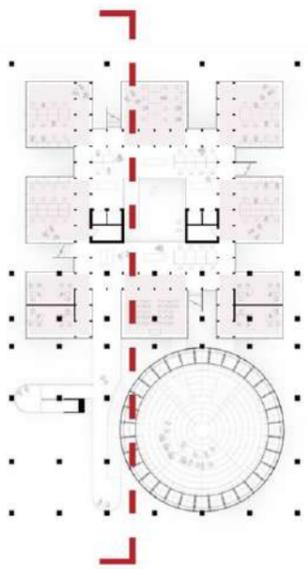


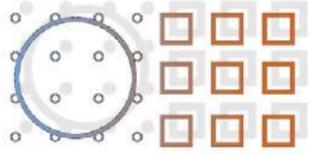
MOVEMENT



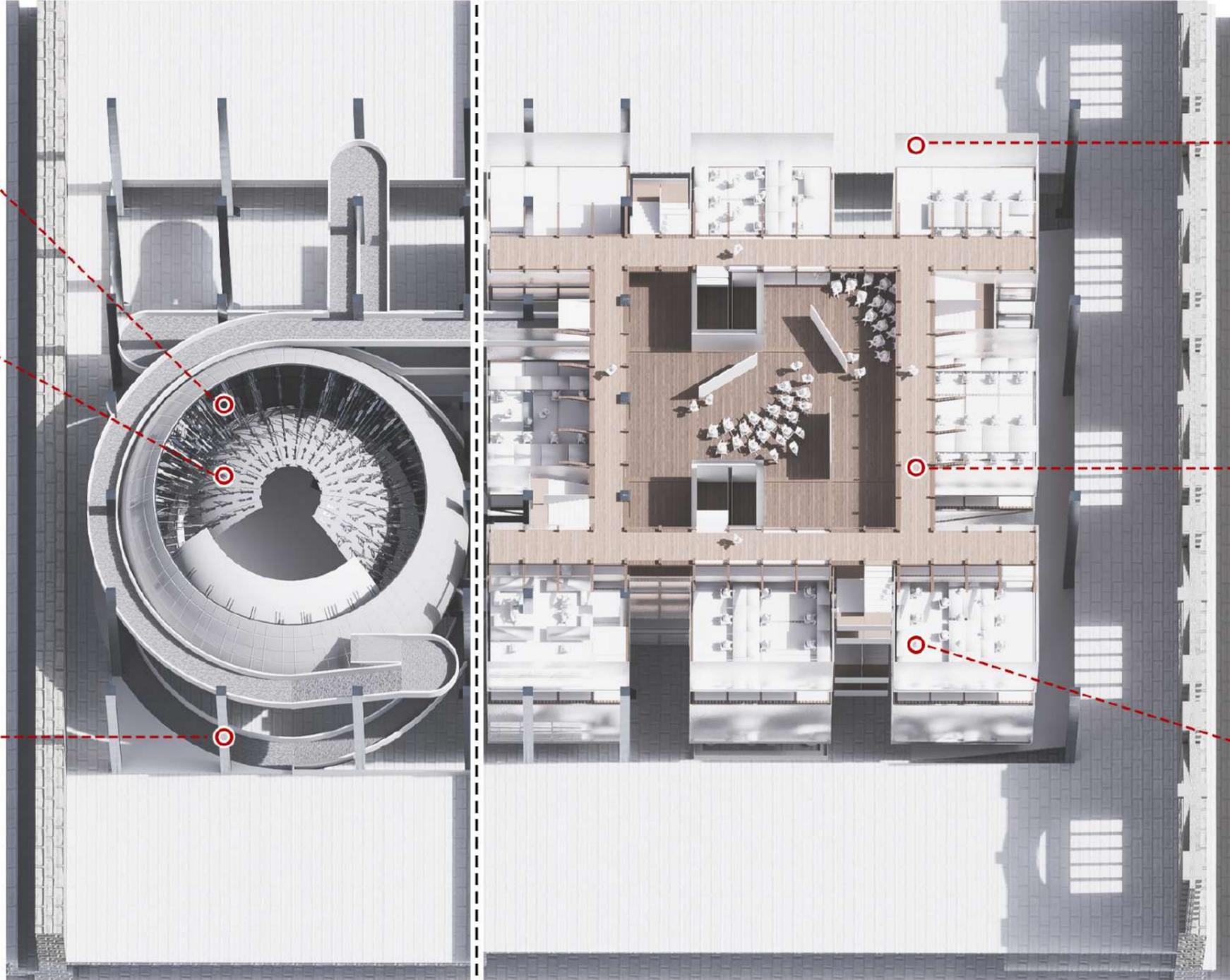
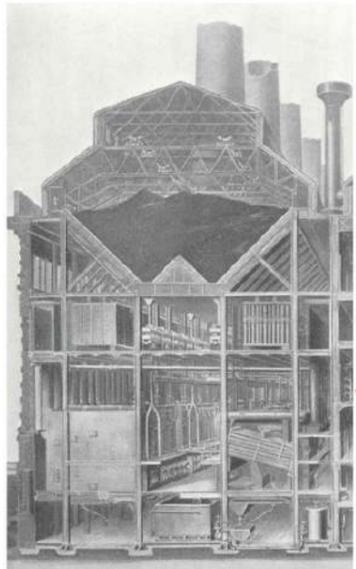
Movement

Creating unexpected interactions within expected storylines makes movement complex and fun while still being convenient and flexible.





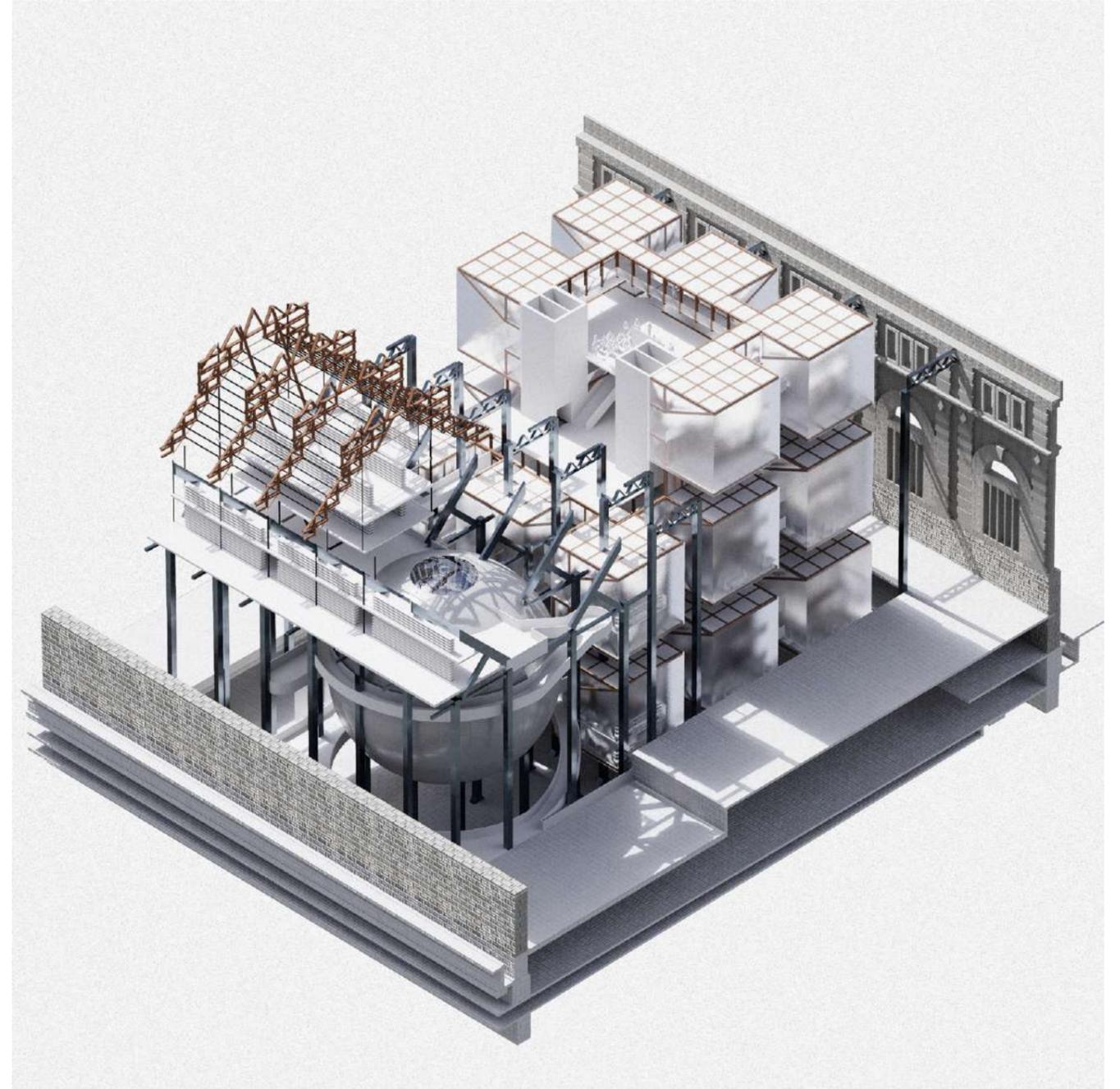
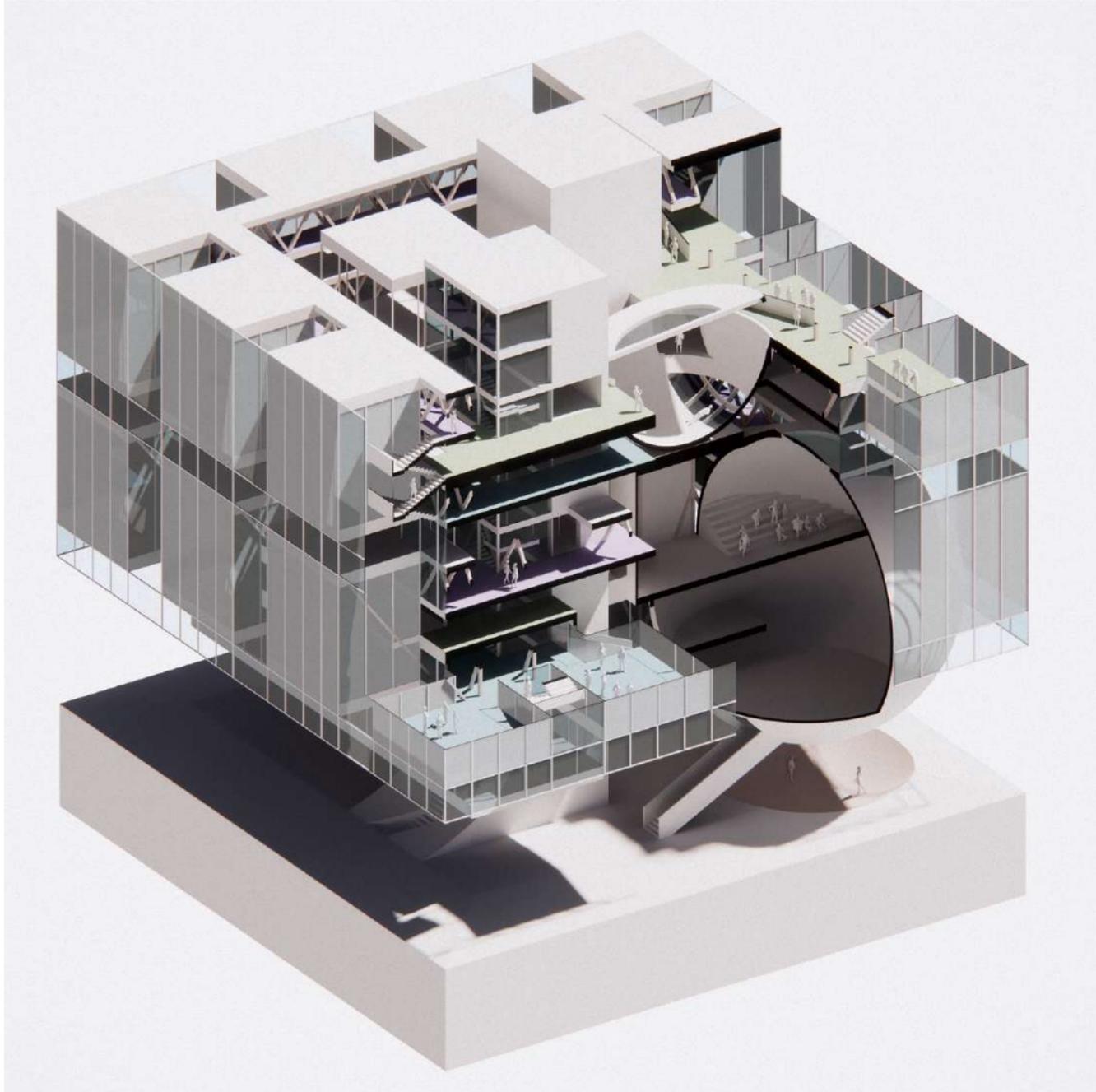
MATERIALITY



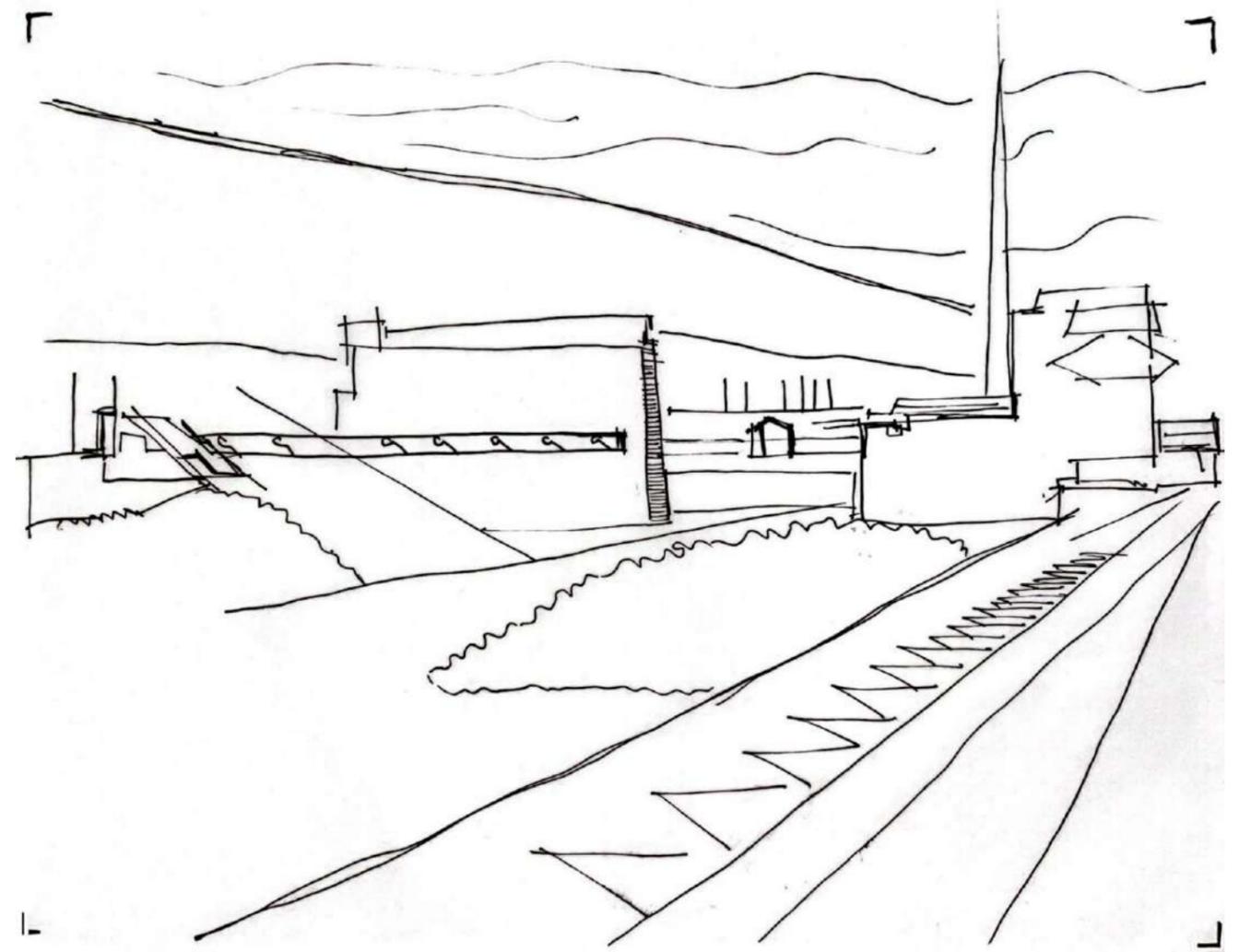
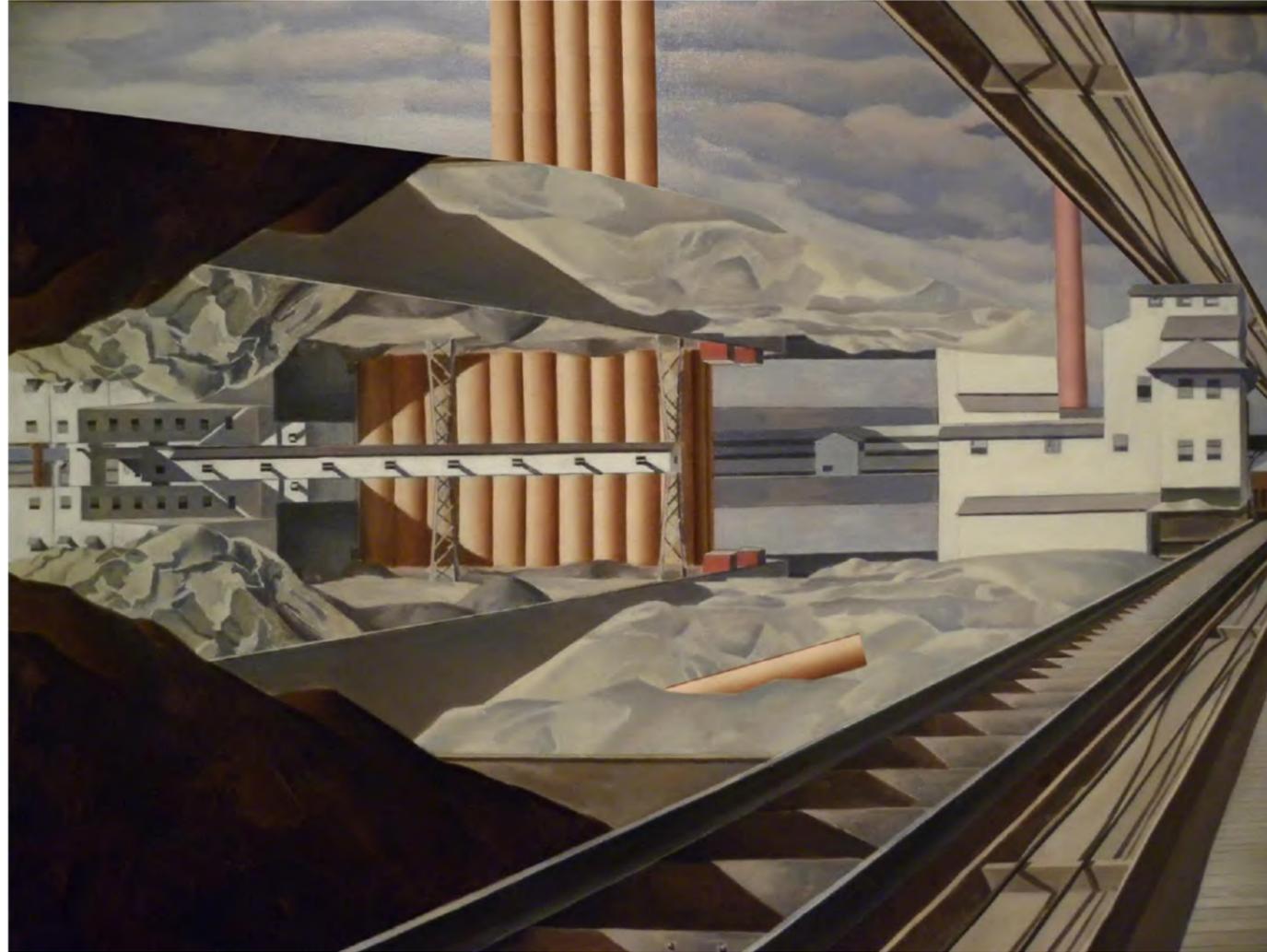




MIDTERM



FINAL



03 [Sheeler, Precisionism and the Technical Sublime]

[LOCATION] MANHATTAN, NY
 [ACADEMIC] 2022 FALL, METROPOLITAN SUBLIME
 [INSTRUCTOR] SANDRO MARPILLERO

Introduction: Photography and Painting

The painting, *Skyscraper*, depicts a corner of New York City in a few neat blocks of color. The painting appears to have been drawn entirely out of thin air with a concept for the contemporary vision. However, when a photograph with an identical perspective is placed alongside the painting for comparison, it becomes clear that the outline of the building in the painting corre-

sponds precisely to the photograph, which means that it is a simplification of the actual scene - as if the photo had been put into Photoshop with a filter of some kind. The author of this painting, Charles Sheeler, was known for his paintings and photographs as an artist active in the 20th century. This would seem to explain his extreme demand for stylistic precision. At a time when photography was well established, Sheeler's quest as a painter must not have been limited to the perfect

reproduction of an objective object. Where did he get the precise color blocks in his paintings? Why were his subjects mostly industrial buildings and cities?

1



A boat leaves the countryside



The boat reaches the city, a runner rushes into the city

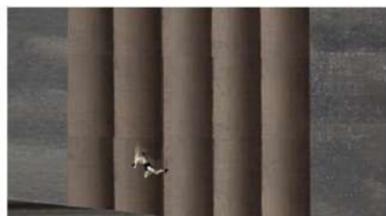


The runner is blocked by a man

4



Runner falls from tall building



The scene fades as the tall buildings become barns



Runner falls to the ground,

7



The runner turn back in fear



The runner bumped into himself



, but didn't stop him from falling

10



Runners boarding and leaving



The boat leaves the city



Runners return to the countryside

13



The runner sees himself who has not started the journey



The runner tries to stop himself before he starts



His block failed

16



Runners board the boat to the city



The boat leaves the countryside

A turning point in art: New Realism

From the perspective of art history, the cult of technology brought about by industrial development and modernization guided a significant shift in the art of painting. This shift did not occur only in the choice of objects but also in the attitude of creation. Radical artists who predated Sheeler argued that from the creation of art to its development into 19th-century realist painting, art remained in a phase of imitation and repetition of forms found in nature. The worship of the natural world drove primitive people to depict the ripples of rivers in their murals, just as it drove realist painters to delicately depict the splashing mist of Niagara Falls. Both were based on observing "natural forms," and both sought to reproduce them perfectly. The attitude was the same. Only the technique had improved. Art was thus trapped in an infinite process of convergence to the real nature.

Perhaps it was the advent of early photography and the maturation of machinery that, while dissolving the fundamental meaning of reproducing nature, made sensitive artists sense that humanity was moving away from its dependence on nature.

Futurism, by depicting dynamics, attempted to merge the beauty of the human body, which represented the classical, with the beauty of the machine, which represented the modern." It is here that the two worlds have come together." At the same time, Cubism, born by Cézanne, concentrated on the dismantling of natural forms and their reorganization. Futurism and Cubism questioned the repetition of art and thus stood on the threshold of non-objective art. Abstract geometric patterns were used extensively to exclude the objective image's intuitive influence. At the moment of completion of the painting, forms that did not exist were given new life. The artist was given the freedom to manipulate reality. In the first decade of the 20th century, Hillel visited Michael and Sarah Stein, patrons of Pablo Picasso and

Georges Braque, in Paris. The Cubist style of the latter two significantly influenced Sheeler's later work. It also became interested in the urban themes that Italian Futurism was so keen on.

After moving to New York City, there, the streets and buildings of Manhattan became the focus of his work. His love of photography made him accustomed to taking photographs and making sketches before painting. Interestingly, Sheeler drew abstract, clean textures from Cubism and Futurism without disrupting the structure of the objective as they did. For Sheeler, this allowed him to use the structure of abstract painting to represent actual reality. His Precisionism style is also known as Cubist-Realism.

As an example of the "industrial sublime," in the 1930s, Sheeler painted the famous scene at the Ford Motor Company's Rouge River plant from his photographs. At first glance, his 1930 painting American Landscape looks calm, like a traditional idyllic landscape, distinguishing it from Futurism and Cubism, which sought instability and dynamism. However, all the themes in the painting are the result of American technical prowess.

Industrial Pastoral Painting: The Natural Sublime to the Technical Sublime

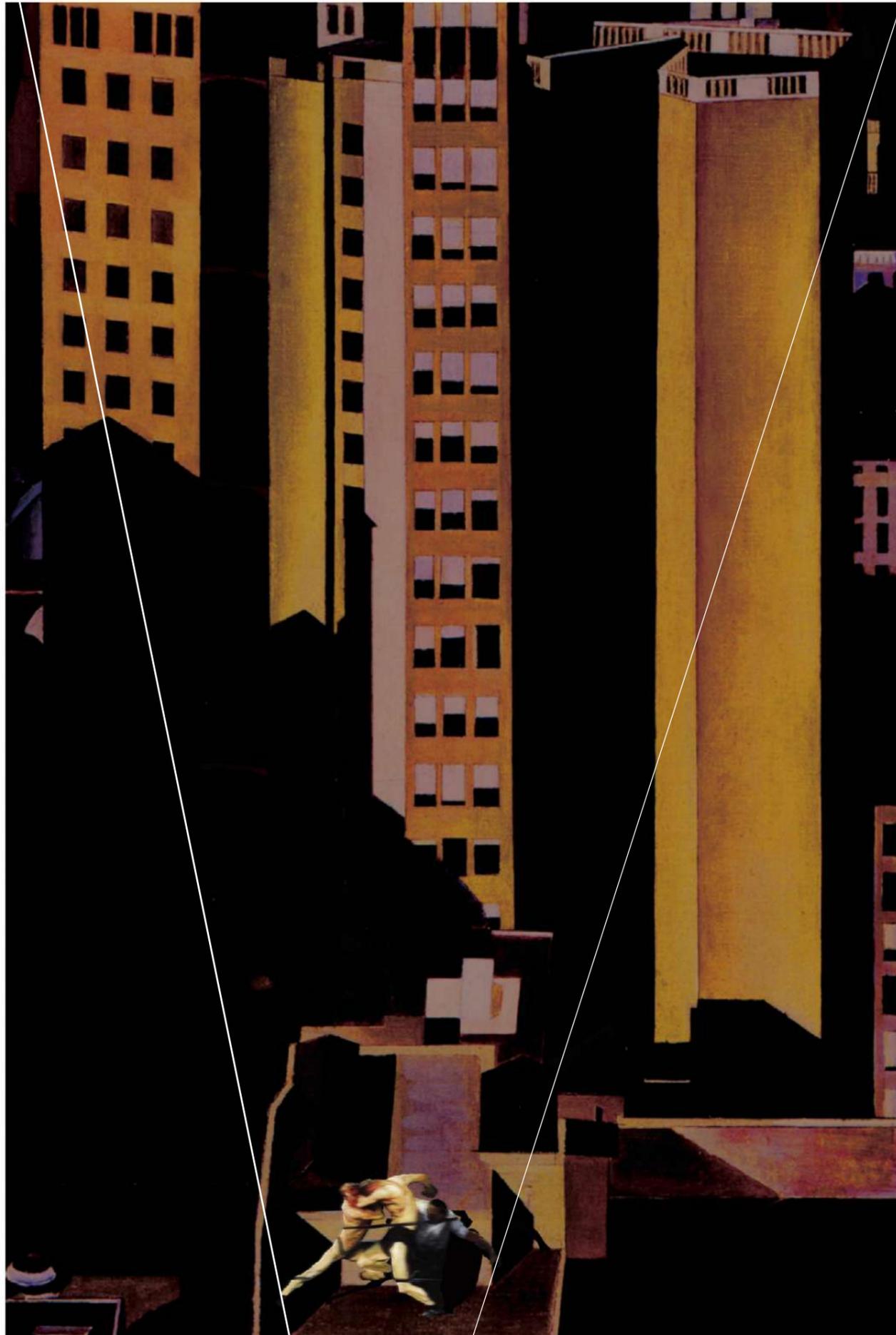
Precisionism painting is a eulogy of social progress by the artists represented by Sheeler, and its aesthetic is intensely American. The calm, traditional idyllic landscape experience sought by his paintings is in line with the appreciation of the natural sublime in the United States during the 18th and 19th centuries. This aesthetic appreciation of the natural landscape carried a different religious, gender, and nationalistic meaning in the United States than in Europe, thus establishing the American natural sublime.

In the 1st century, in an anonymous Roman text, "On the Sublime," the author argues that the sublime is "the echo of a great mind" and

uses the ocean, the Danube, and the Rhine as examples. This is the earliest recognized "sublime" law. Later, in the history of the development of the "sublime" standard, Kant made a significant mark; he said, "sublime objects can certainly cause fear, but the sense of sublime is not, after all, from fear. We call a powerful object sublime, not because it is terrible, but because it raises our spiritual power beyond the usual scale. The sublime does not reside in any object in nature but in our hearts. Thus, the practice of human materiality is the trustworthy source of the sublime. The practice of the sublime originates in observing nature and, thus, the feeling that nature is excellent. As with the transference of art, the observation of nature is weakened as people's practice shifts to violent creation and industrial production.

The new technical sublime was likewise a response of the mind. For example, in his painting Golden Gate, Sheeler represents the image he had in mind of the Golden Gate. Rather than choosing a panoramic composition to represent the majesty of the Golden Gate Bridge, Sheeler chose to depict "what the eye can see" from the perspective of a viewer on the Golden Gate Bridge, where his vision is composed of reinforced concrete and a series of elements that make up the structure of the bridge. This composition's form and content align with the aesthetic characteristics of the technological sublime - to reveal the beauty of the whole from a partial perspective. This artistic aesthetic phenomenon reflects the psychological recognition of machines' efficient production and operation. Moreover, Sheeler's aesthetic ultimately falls on the experience of the space constructed by these static mechanical creations and buildings.

For most of the sublime, the viewer always translates the volume of space into energy and prowess. For example, with the advent of the metropolis, the space defined by towering skyscrapers can be translated into a sense of the sublime. However, the "sublime" is also a sense of people's power, an ex-



COLLAGE: IN THE VALLEY OF THE SUNSET

pansion of the power of their own will. In Nye's book, *The Electric Cityscape*, this sense of the sublime is the awe and respect generated by the technology of the "human collective," including oneself. It can provide a sense of superior self-worth. The light-drenched, gigantic city prompts them to conceive something more powerful and massive than their senses can grasp. It is, in another phrase, a "romance of numbers." In this context, the "sublime" of the individual and the cluster is linked through the bridge of technology. This feature makes the difference between the technical sublime and the sublime of the past.

Ultimately, it can be learned that the Precisionism represented by Sheeler is influenced by Futurism and Cubism, thus focusing on the abstract processing of the real world. The precision and simplicity of its product represent the spirit of the American technical sublime. However, the aesthetic tendency toward static beauty is correlated to the American aesthetic tradition of the natural sublime.

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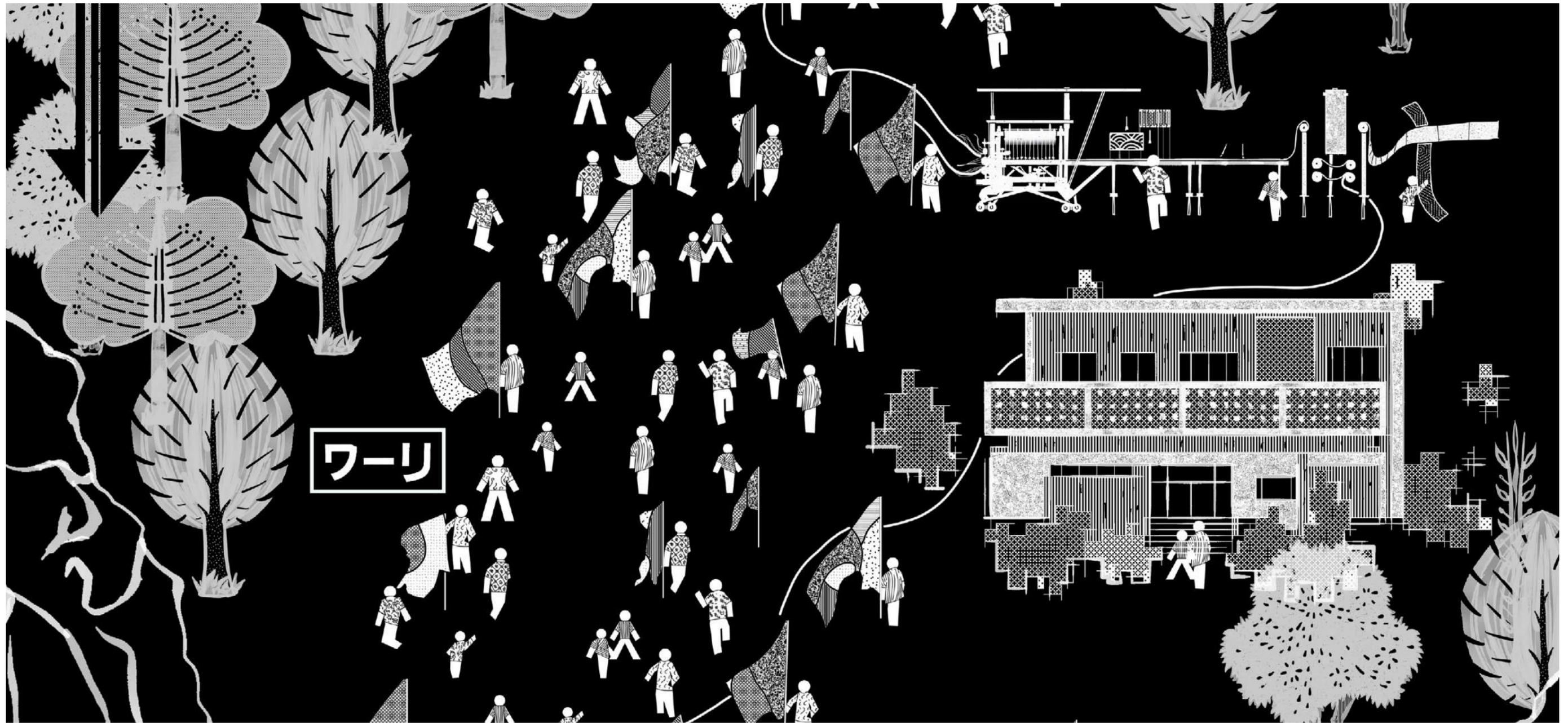


Anagha

The last lament

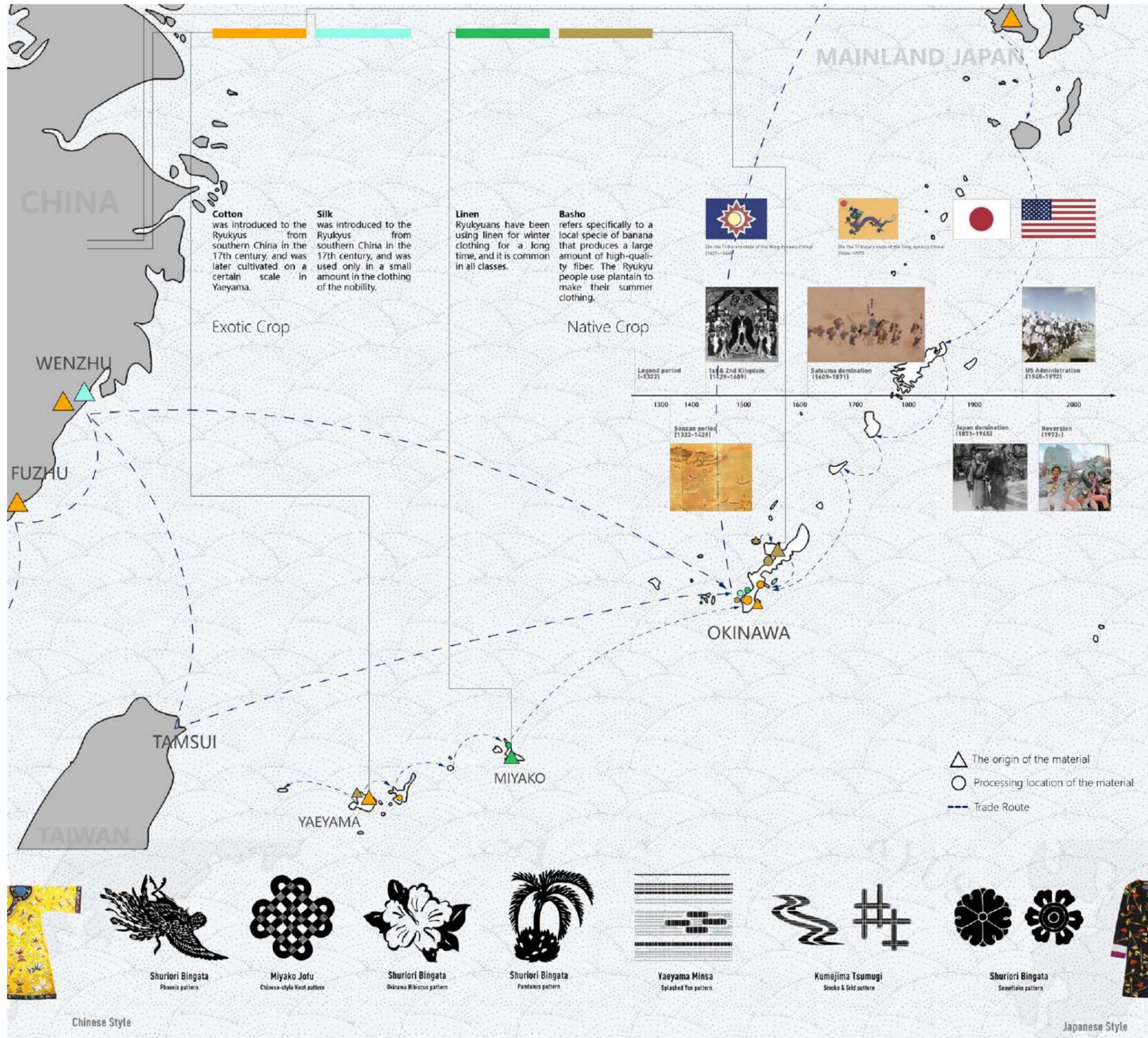


COLLAGE: SAILING



04 [BECOME A FESTA: REWEAVING RYUKYU]

[LOCATION] OKINAWA, JAPAN
[ACADEMIC] 2023 SPRING, ADV STUDIO
[INSTRUCTOR] PATRICIA ANAHORY



Becoming a Festa: Reweaving Ryukyu

This project is an architectural deconstruction and expansion of Ryusou, the traditional Ryukyu costume, under a series of issues related to land resources and cultural heritage, and thus conceives a parade, festival, and carnival that reweaves traditional Ryukyuan culture and identity.

Ryusou is a reliable historical document, and the richness of the exotic fibers and motif archetypes used in Ryusou allude to the trajectory of the archipelago's culture as it continues to integrate other cultures and develop. In an architectural interpretation of Ryusou's new vision: yarns are fibers and the land on which plants grow. The pattern is the island of culture and the ocean currents of arrival. Weaving then becomes the process of bringing everything into the same narrative.

Ryusou's narrative touches on the severe issues of the Ryukyu community on the island: The tough fibers used to make a particular type of Ryusou come from the tide-release forests that have fought land erosion for centuries. On the other hand, Ryusou has also been used as a basis for identifying and discriminating against Ryukyuans by

native Japanese communities in the past. In the past 20 years, protests against the U.S. military bases in Okinawa have become a breakthrough for Ryukyuans in their quest for autonomy and identity. Because the presence of the base is not only an occupation of Okinawa's precious land resources but also reveals the Japanese government's continued disregard for Ryukyuans civil rights issues.

Faced with such a complex situation, Ryusou is to serve not only as a record of the historical coming of the Ryukyu people but also as a banner of celebration that can shape the cultural confidence of future Ryukyu people. A friendly cultural procession that lasts several days and passes through several stations with Ryusou as the yarn was conceived. Moreover, in the process, architecture challenges its ability to interpret and construct relationships beyond the material. The festival will be a journey to reweave the narratives above scattered in different dimensions.

