



PORTFOLIO

Maria Victoria Macchi

COLUMBIA GSAPP - AAD

2019 - 2020

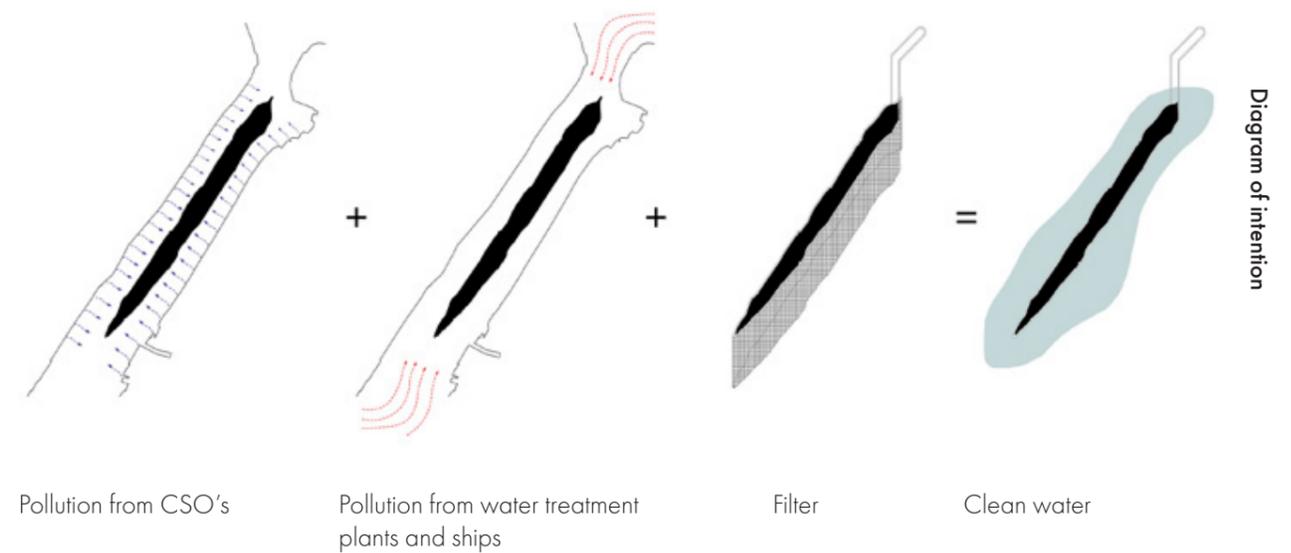
INTERSPECIES PURIFICATOR

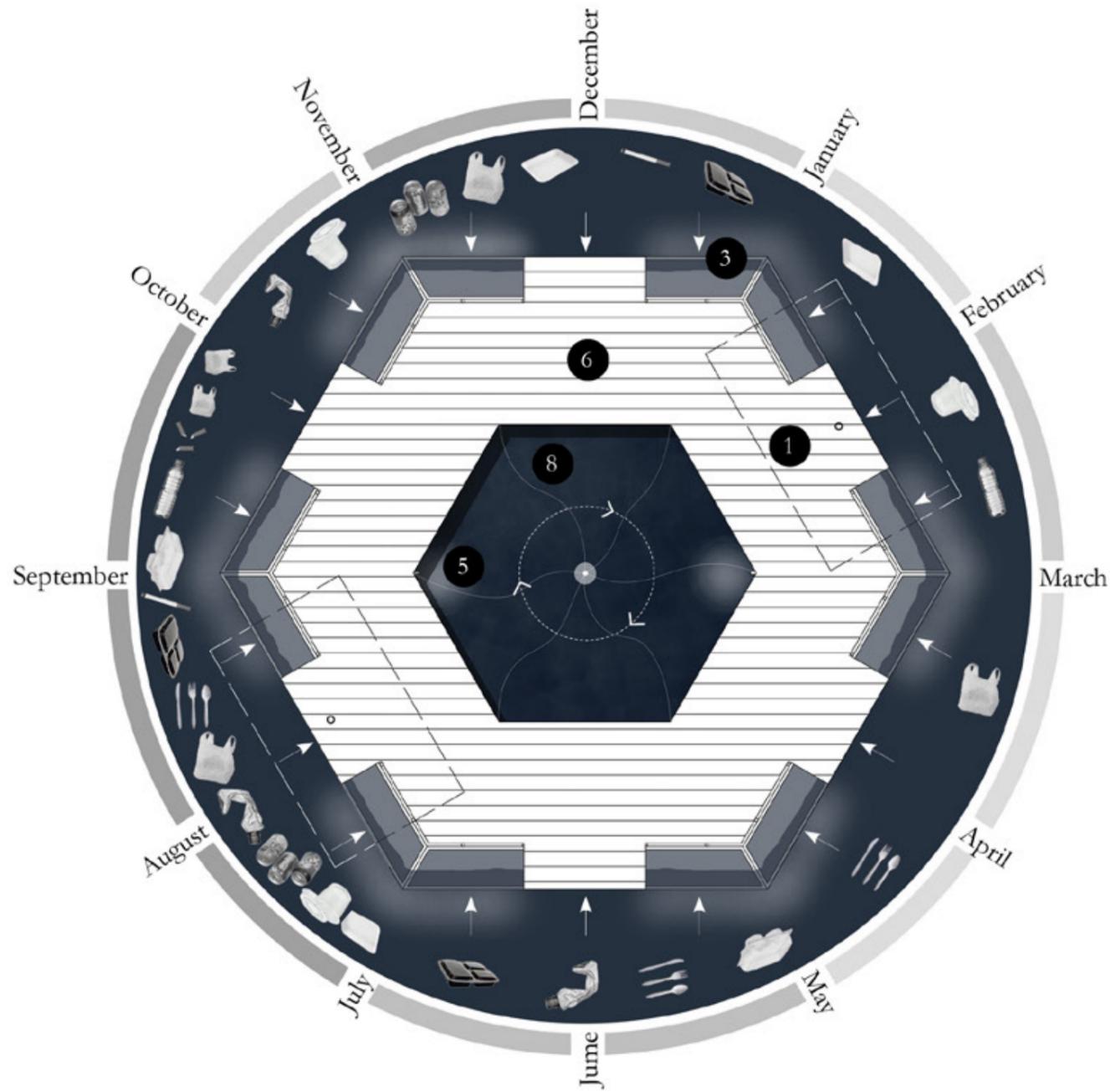
Team: Alex Hudtwalcker Rey

Understanding entertainment as a tool to raise awareness, we created a device to mitigate the contamination of the East River.

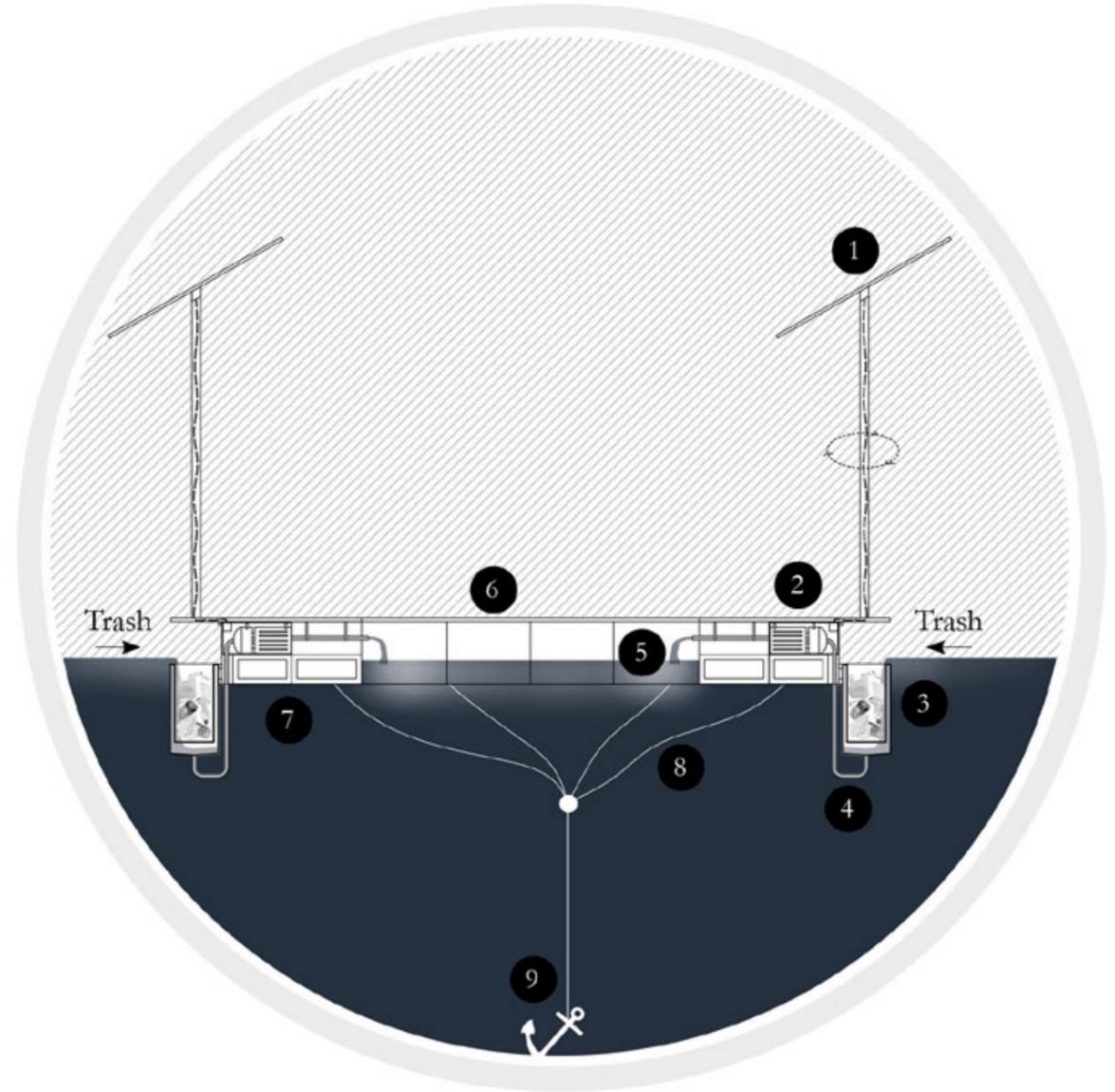
The combined sewer overflows discharge water occasionally from the main sewage pipes into the river, carrying not only water but also untreated human, industrial waste and debris.

In response, the design of this device will be in charge of collecting the trash right from the source. Those inventions will be taken to Roosevelt Island to be adapted into 3 different devices. Each one of those, will work as a system equipped with living species of oysters, that will help the filtration of the water. With this, the ecosystem will be restored in order to create a safe environment for the public.

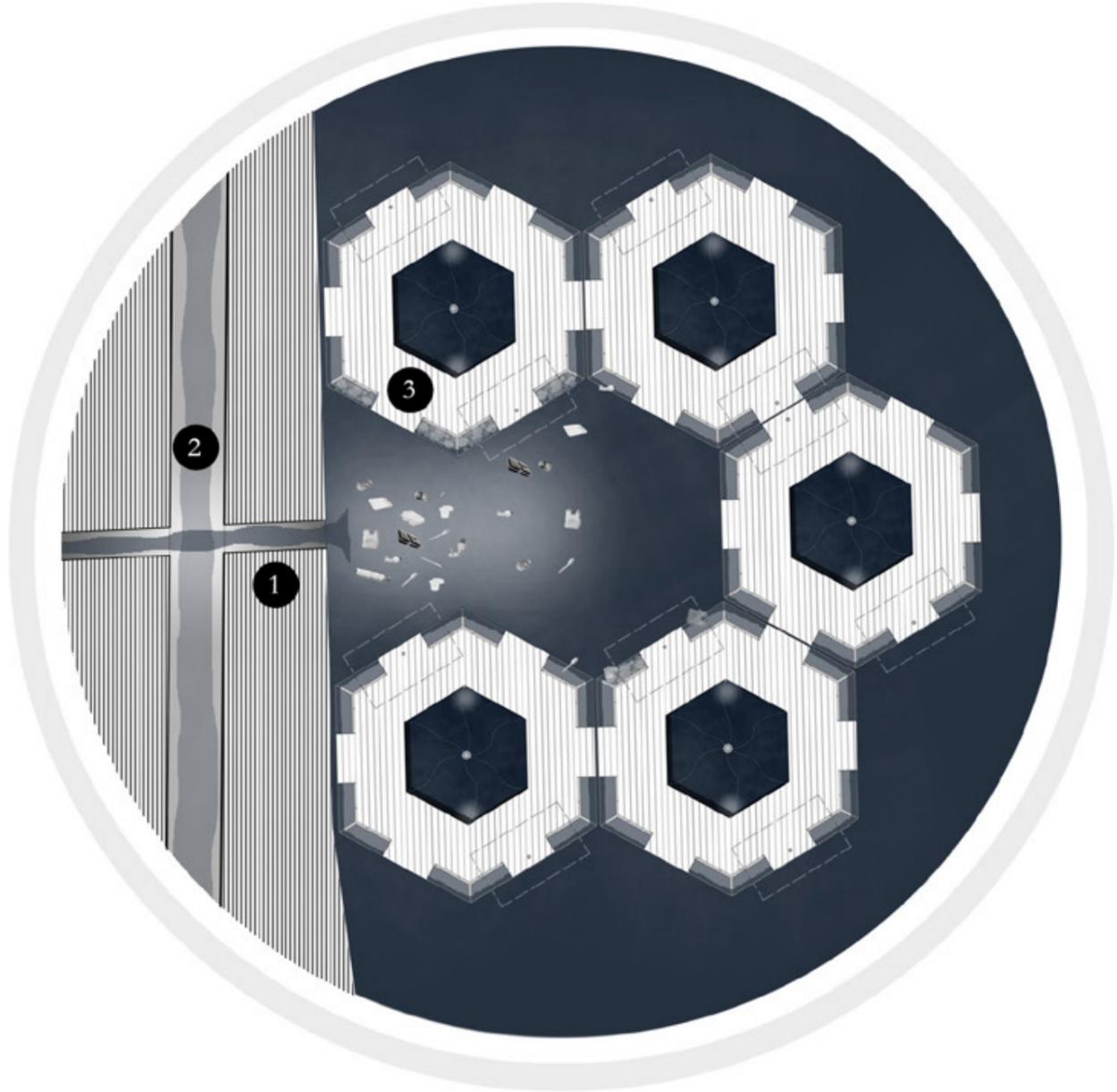




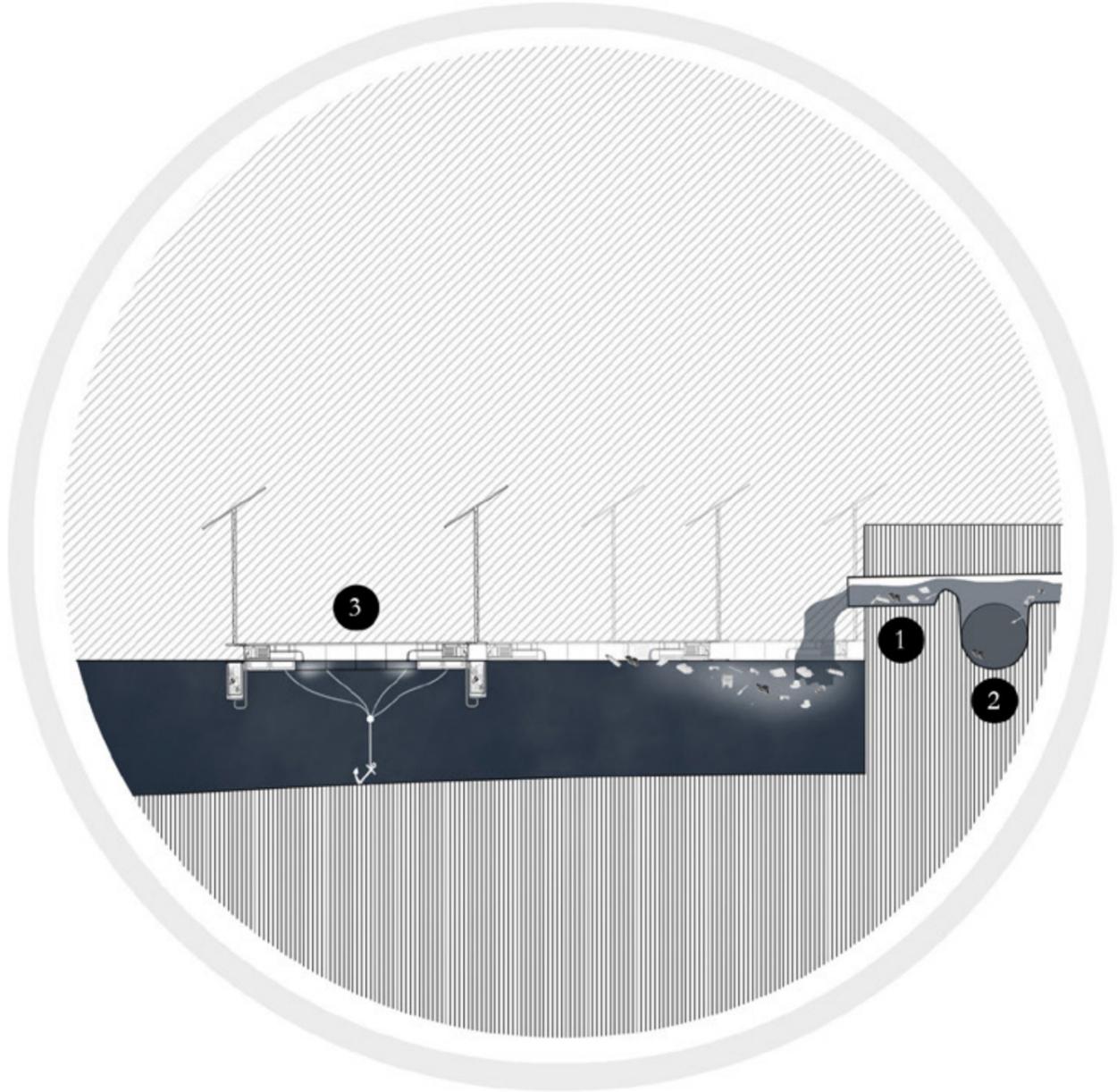
- 1. Operable solar panel facing south 30°
- 2. Water pump
- 3. Riverbin collector
- 4. Waterhose
- 5. Water flow

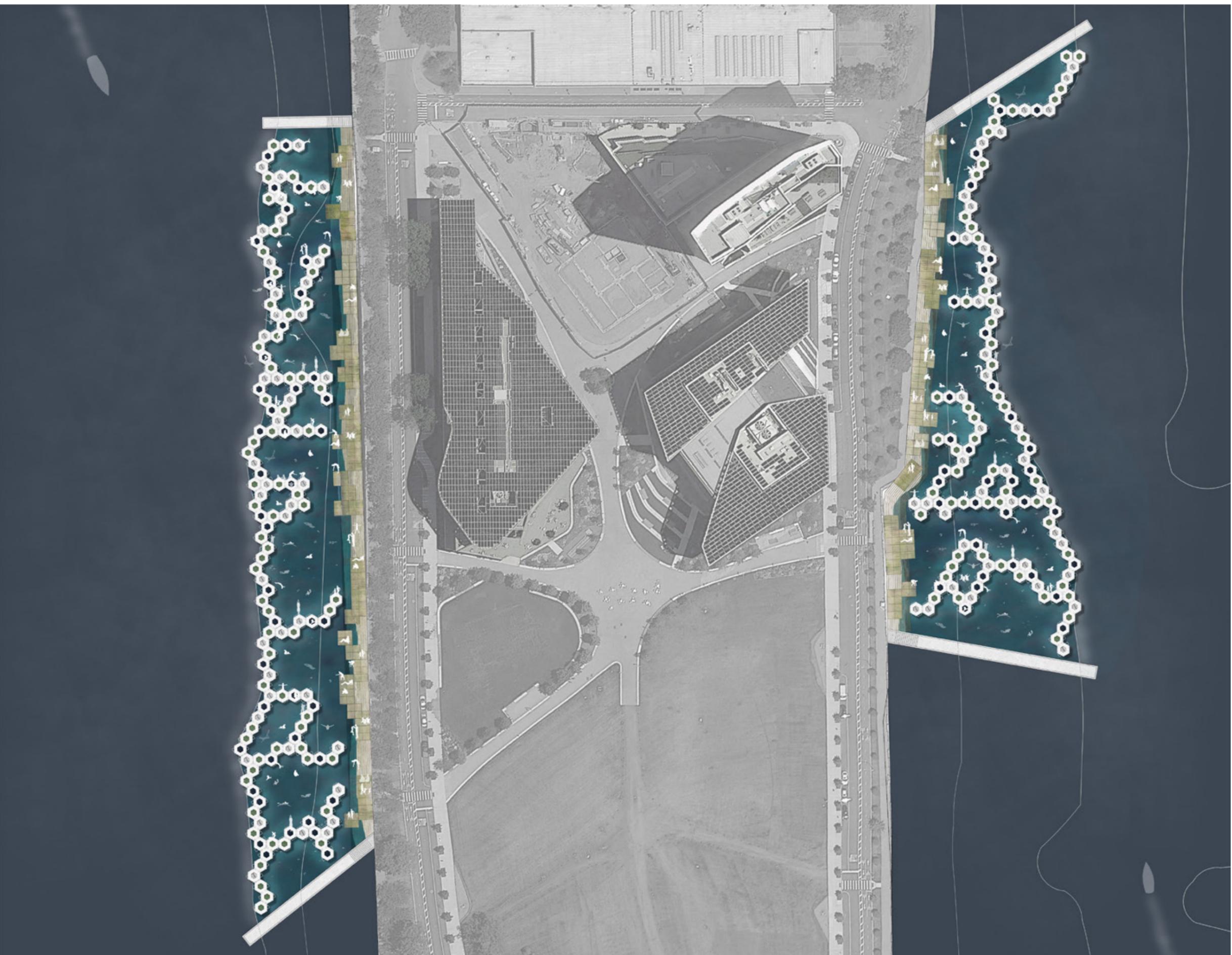


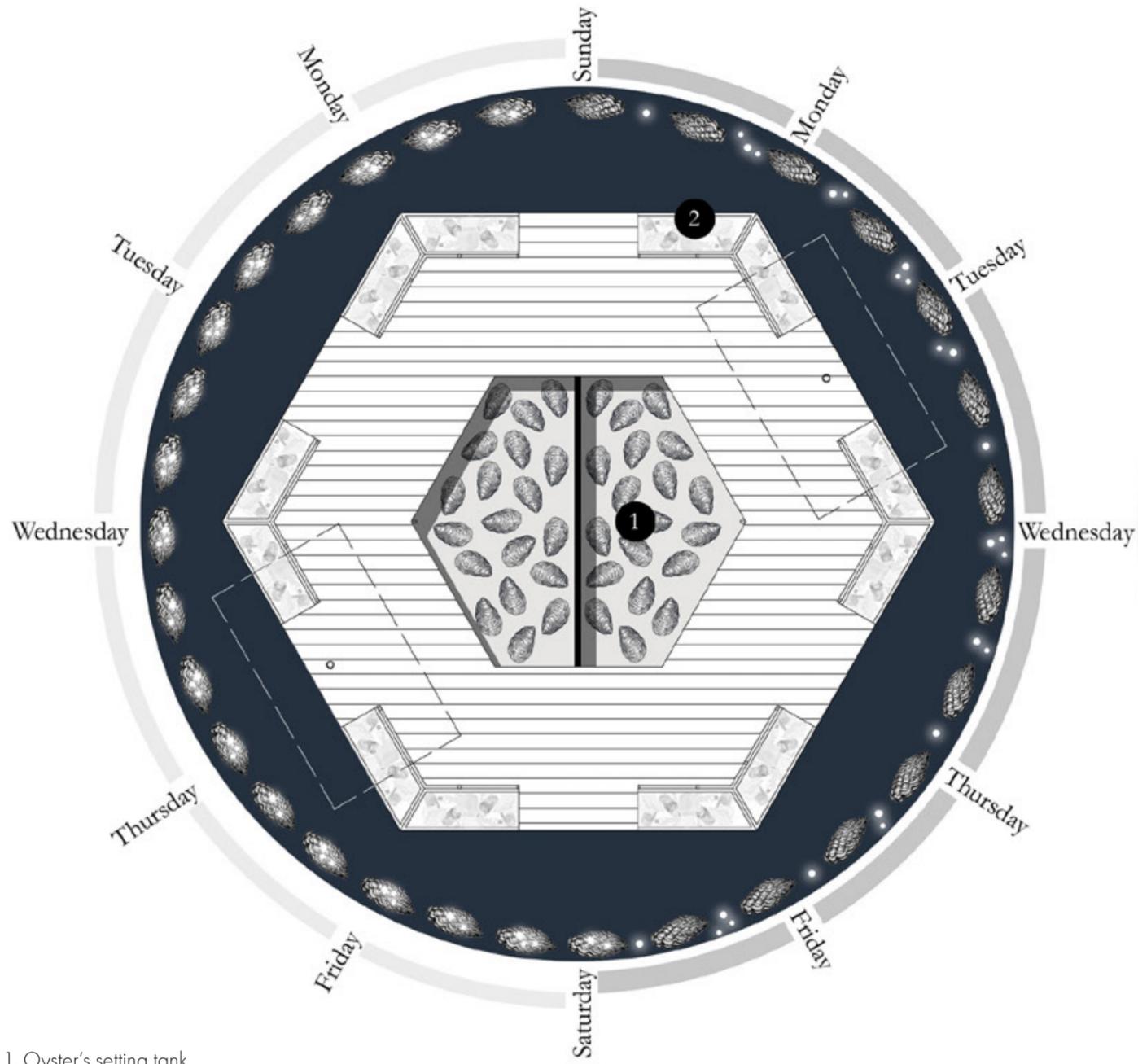
- 6. Platform
- 7. Floatable polyethylene docks
- 8. Roper for bracket system
- 9. Anchor



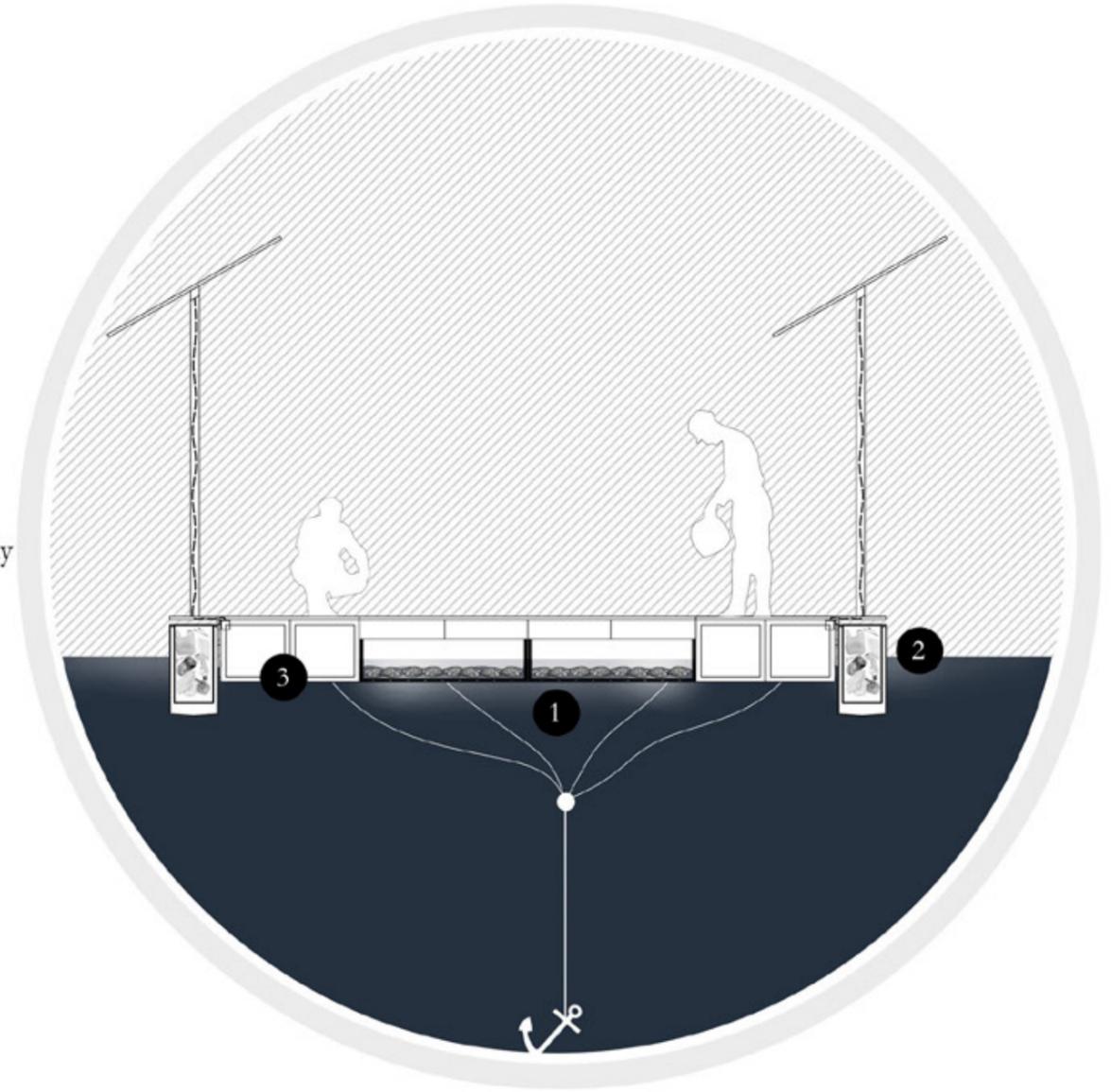
- 1. CSO outfall
- 2. Major sewerline
- 3. Device







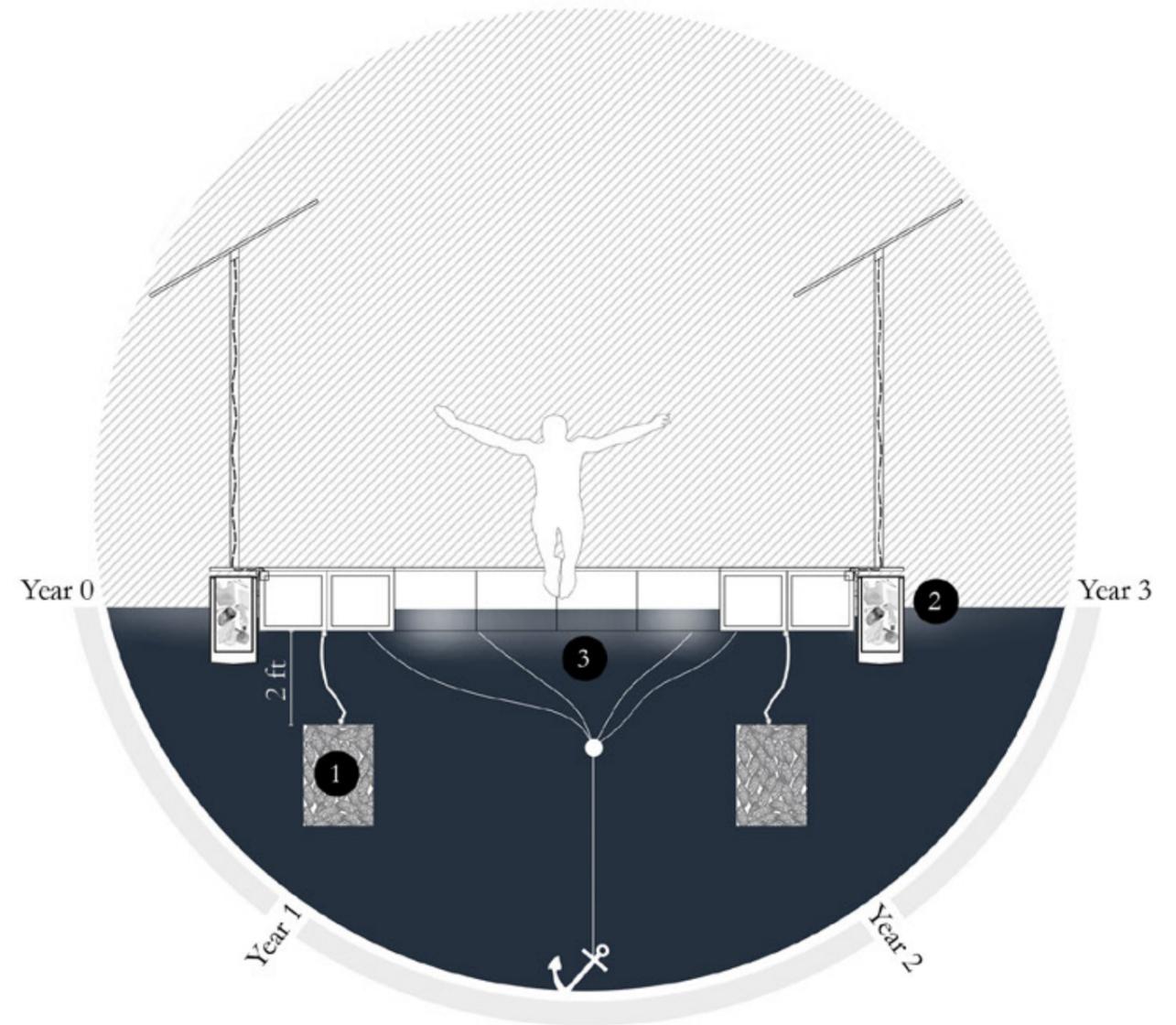
1. Oyster's setting tank
2. Riverbin collector

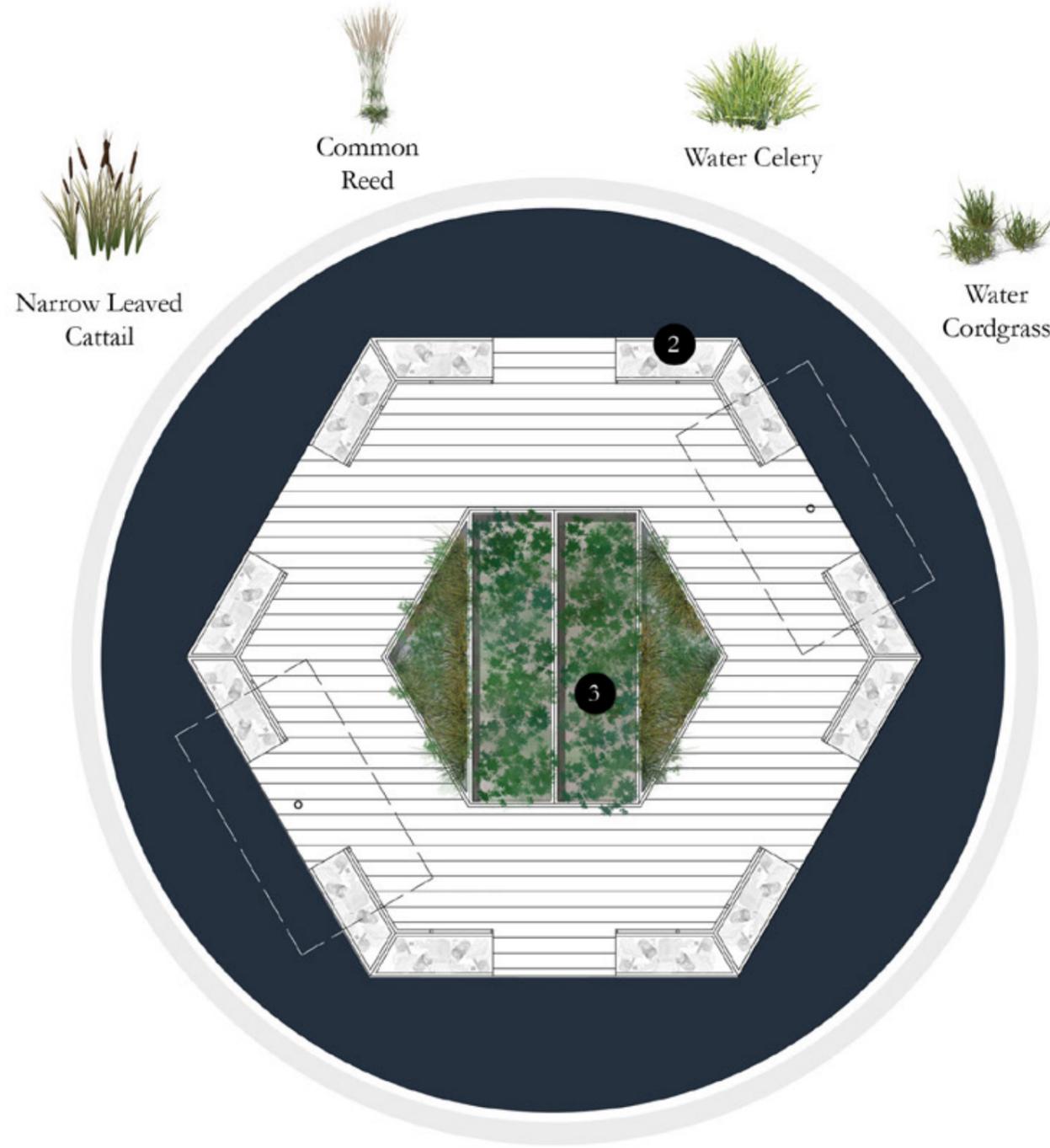


3. Floatable polyethylene docks

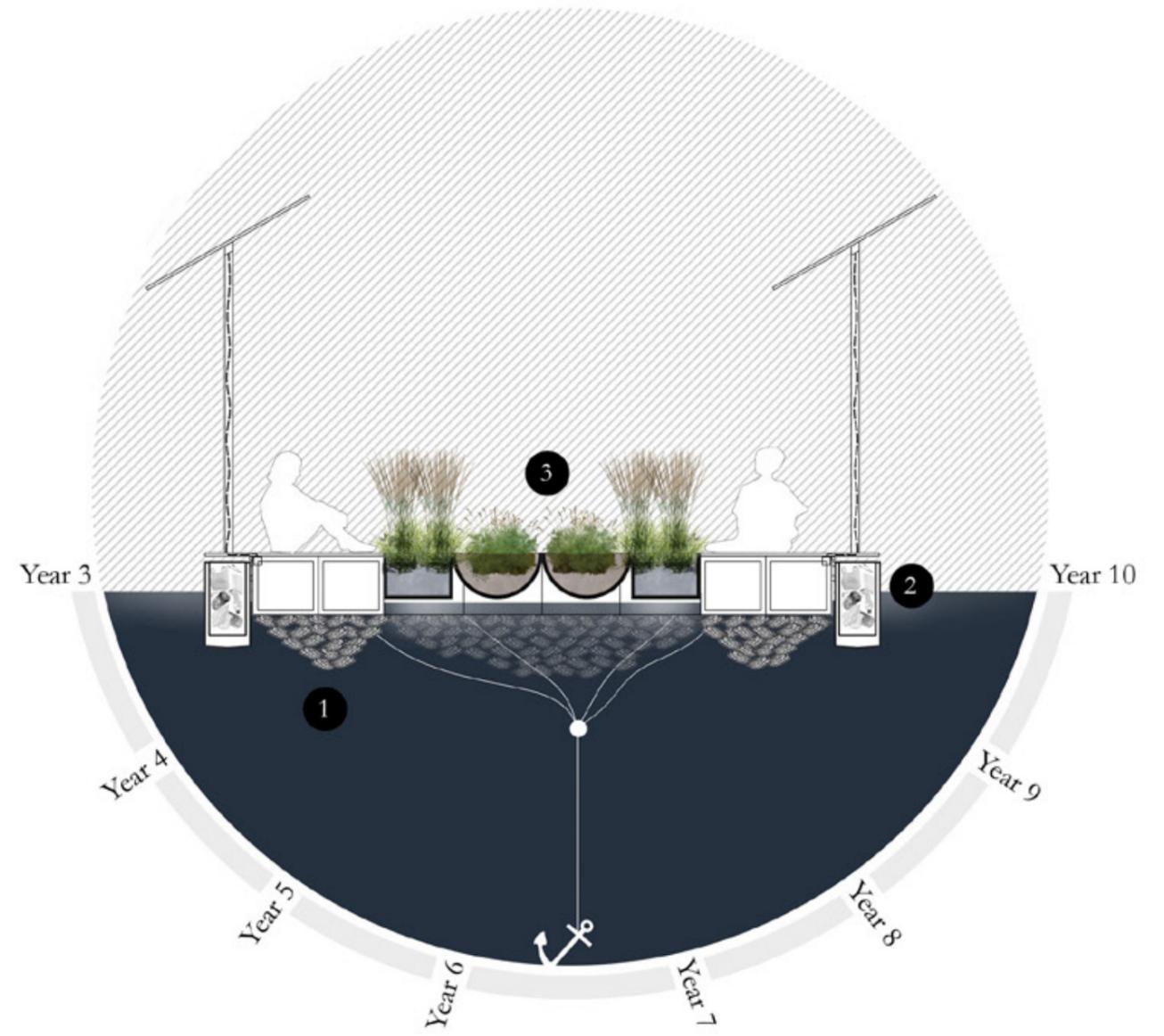


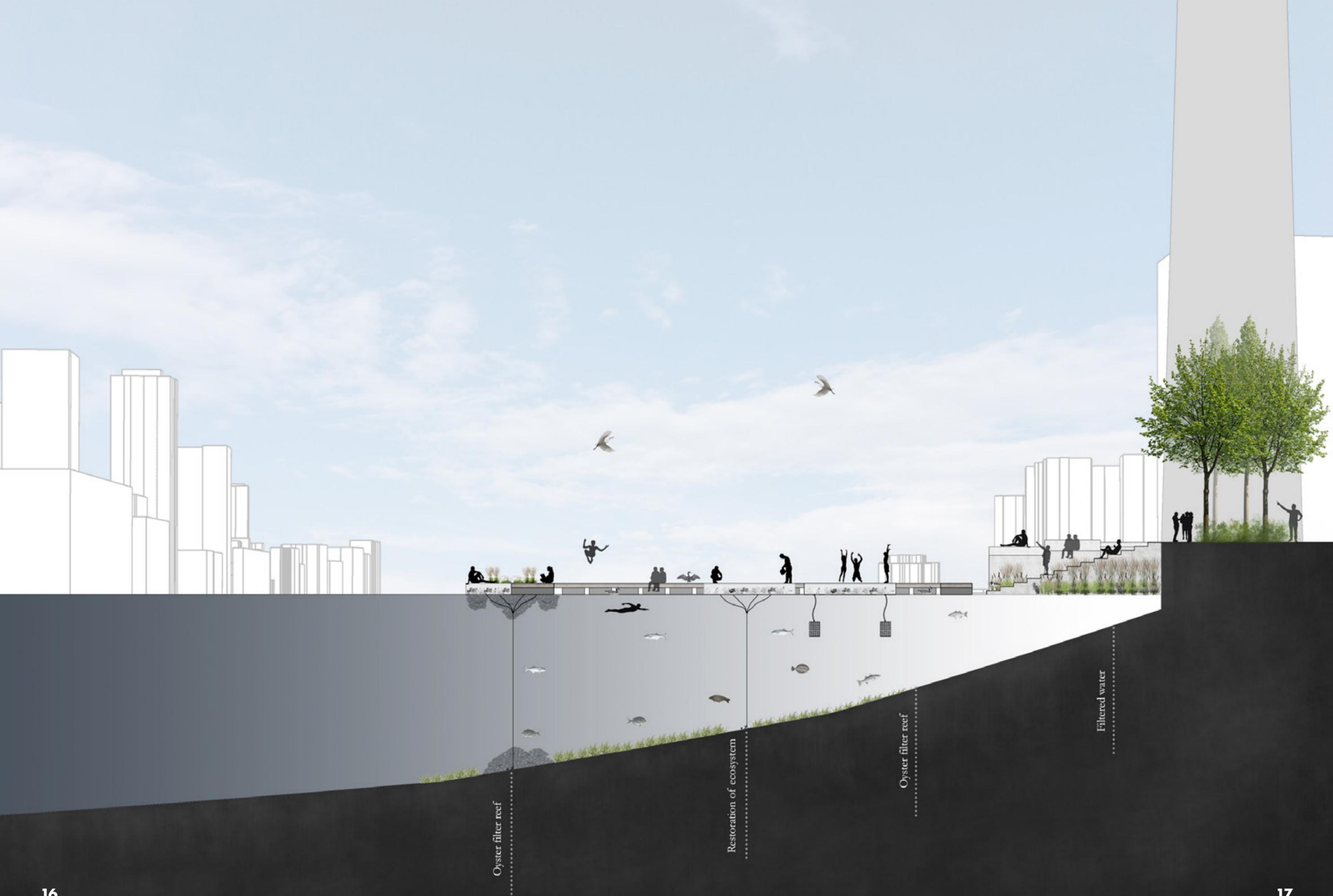
- 1. Oyster's grow-out cages
- 2. Riverbin collector
- 3. Pool





- 1. Oyster's reef building
- 2. Riverbin collector
- 3. Wetland





Oyster filter reef

Restoration of ecosystem

Oyster filter reef

Filtered water

Mallard



Canada Goose

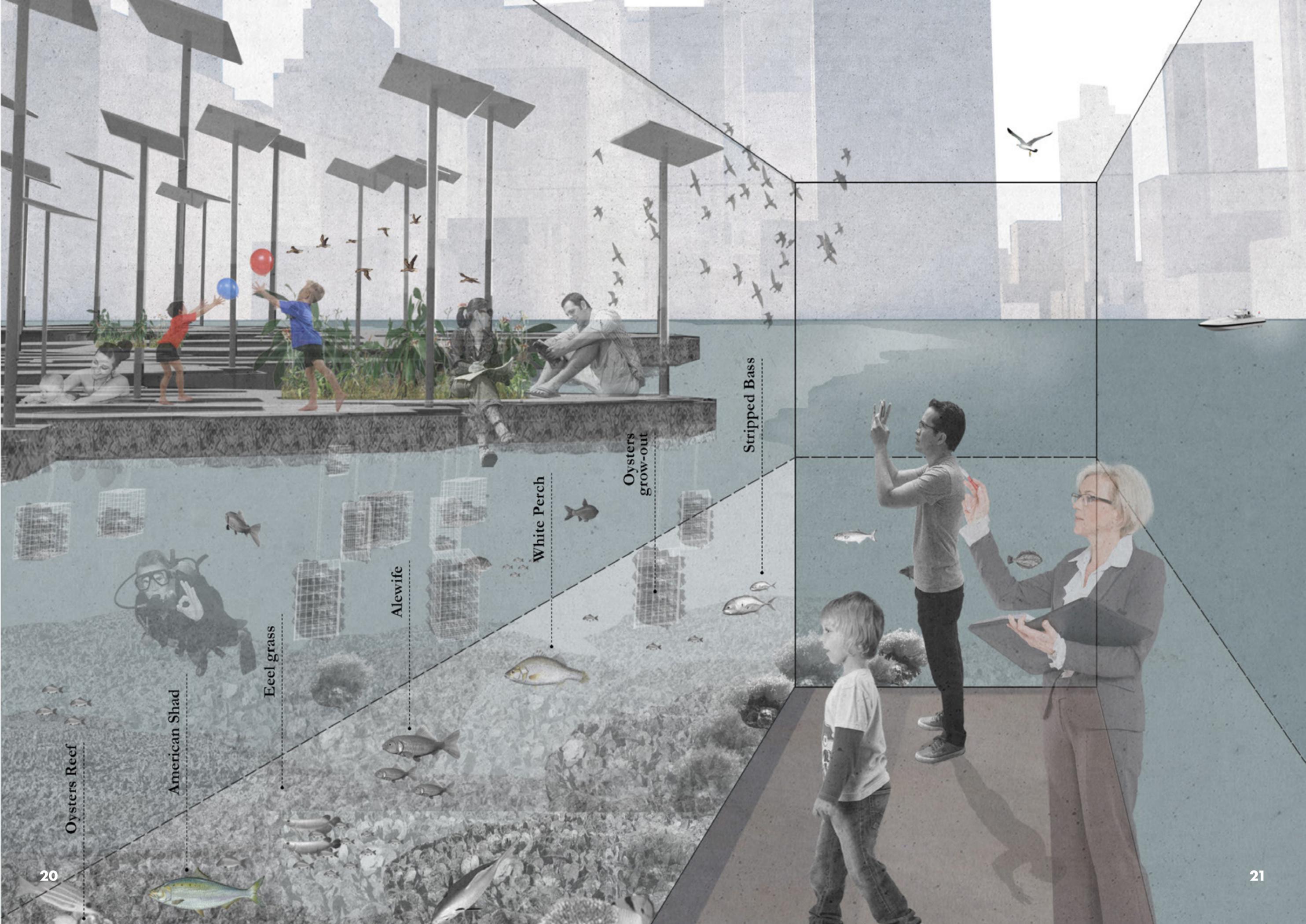


Ring-billed gull



Snowy Egret





Oysters Reef

American Shad

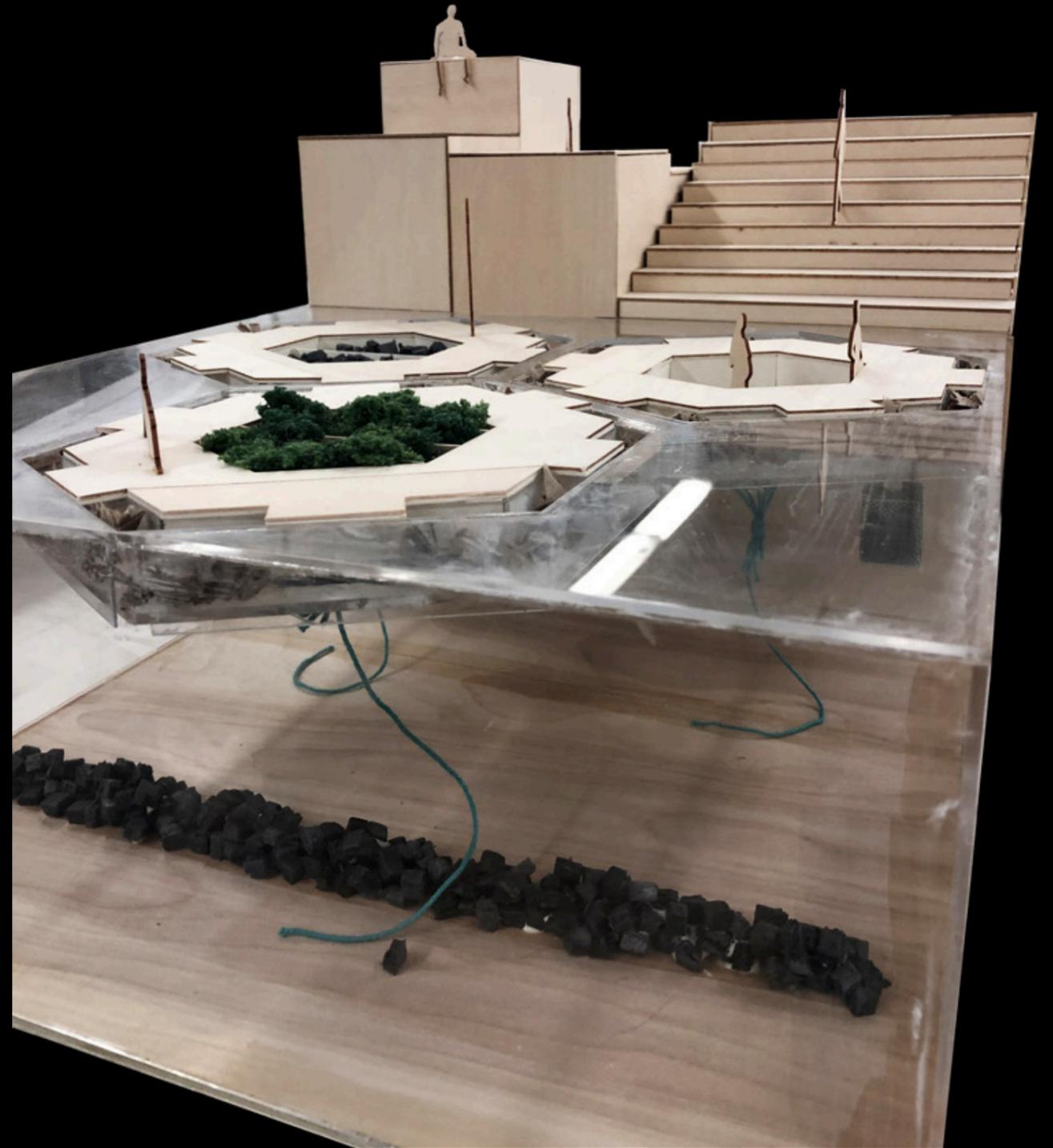
Eeel grass

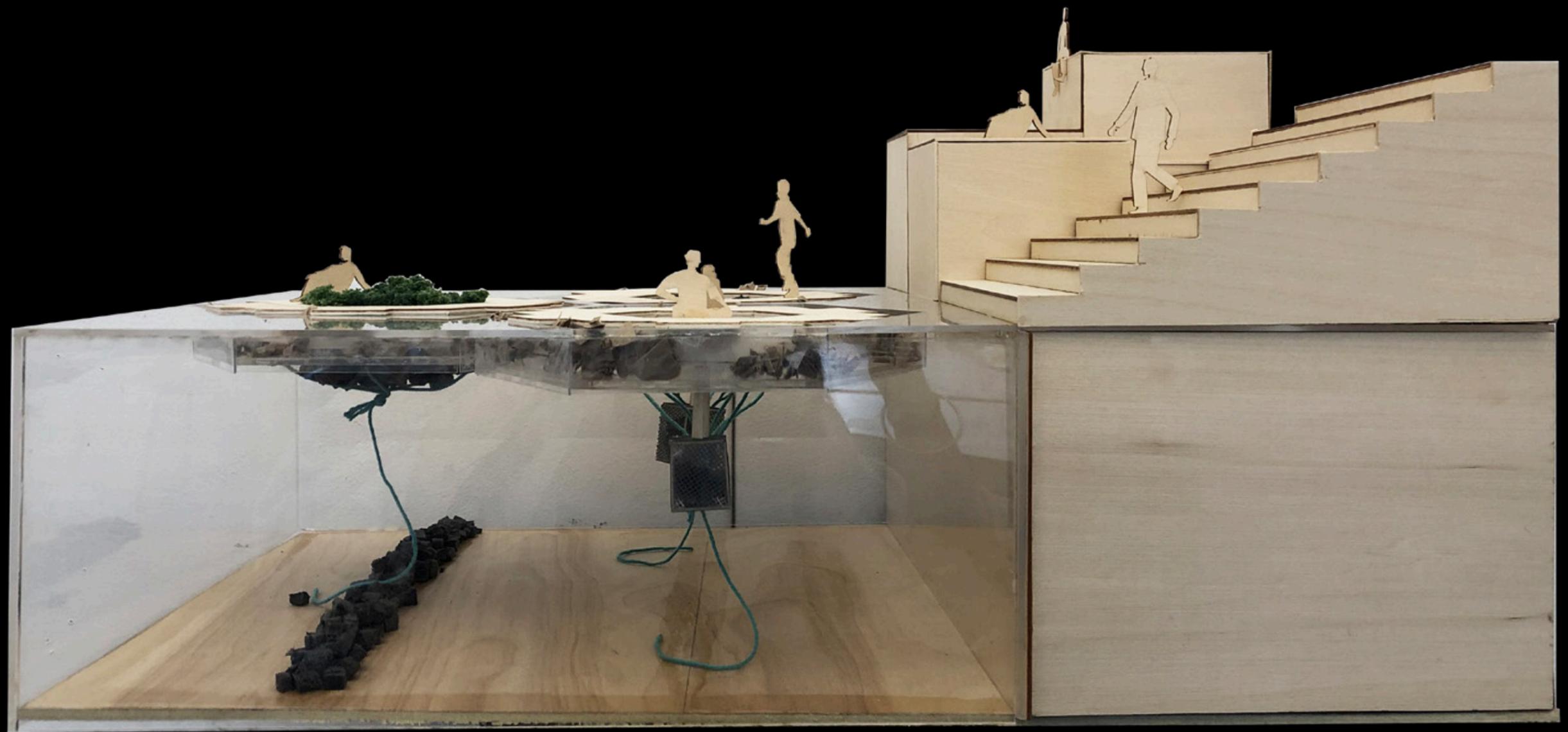
Alewife

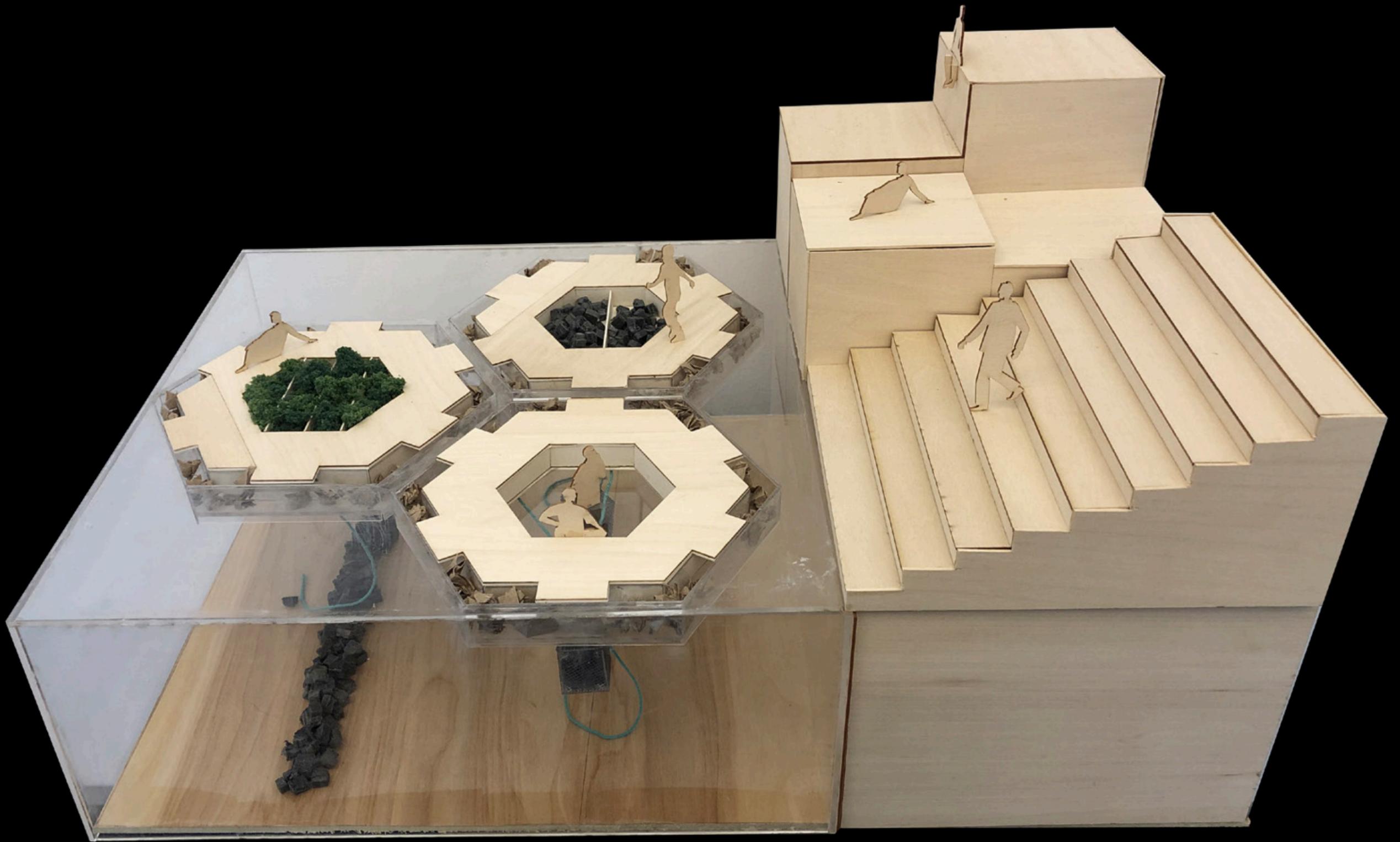
White Perch

Oysters grow-out

Stripped Bass







POWERSCAPES

Team: Rafaela Olivares - Anam Izhar Ahmed

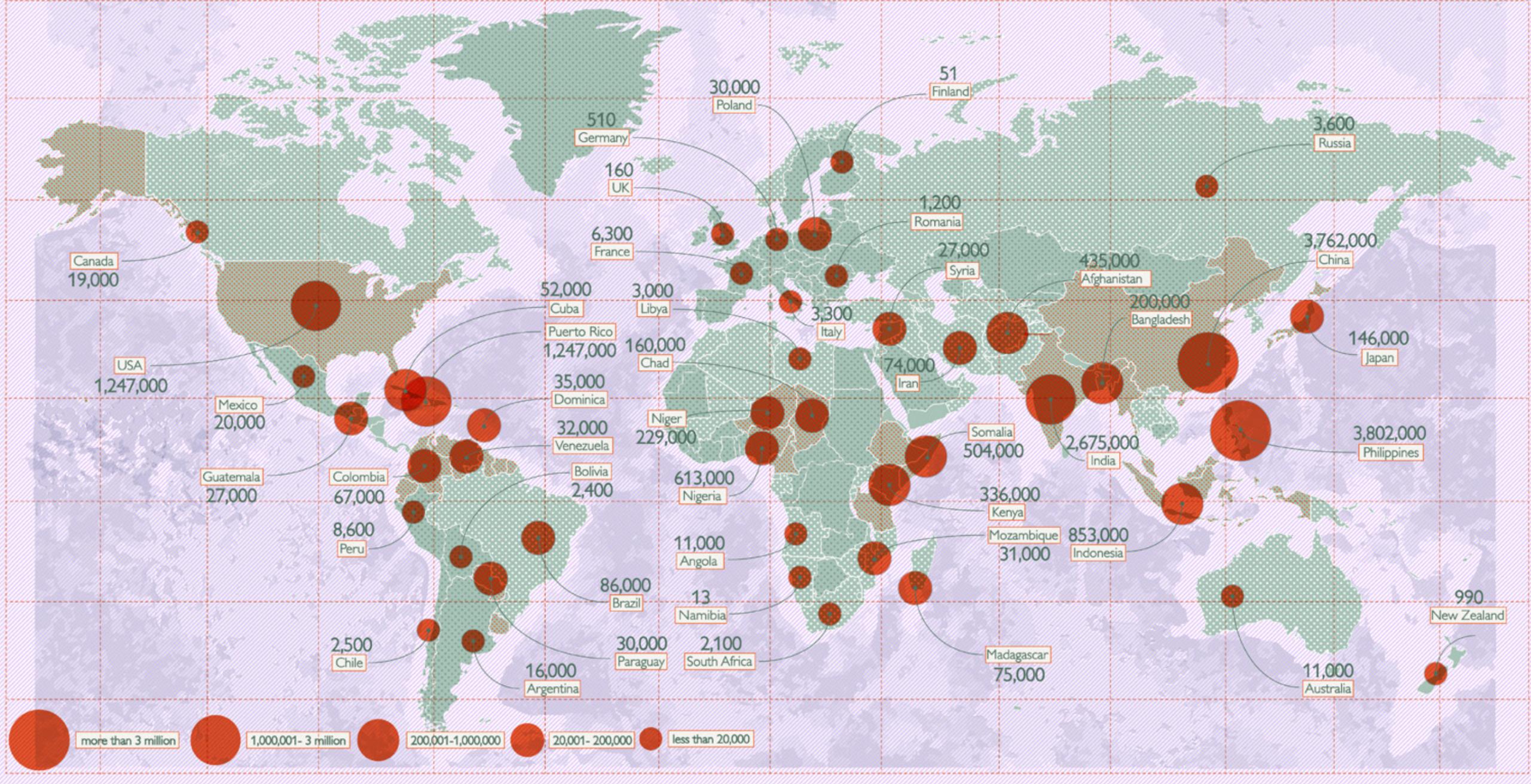
Powerscapes addresses the gendered dimensions of the climate change crisis by focusing on women and the disruption of their socio-economic setups, which consequently force them to migrate. Spaces are designed to create shared resources between the community of the building and the city. Questioning and proposing an economy alternative to capitalism.

Creating a system that provides the infrastructure, tools and assistance for the residents to produce artifacts, technology and foods aiming for the financial empowerment of the migrants. A series of mixers with an assemblage of spaces, address entertainment, celebration, healing and support. The living typologies challenge and reimagine the domestic labor implied in our current ways of living.



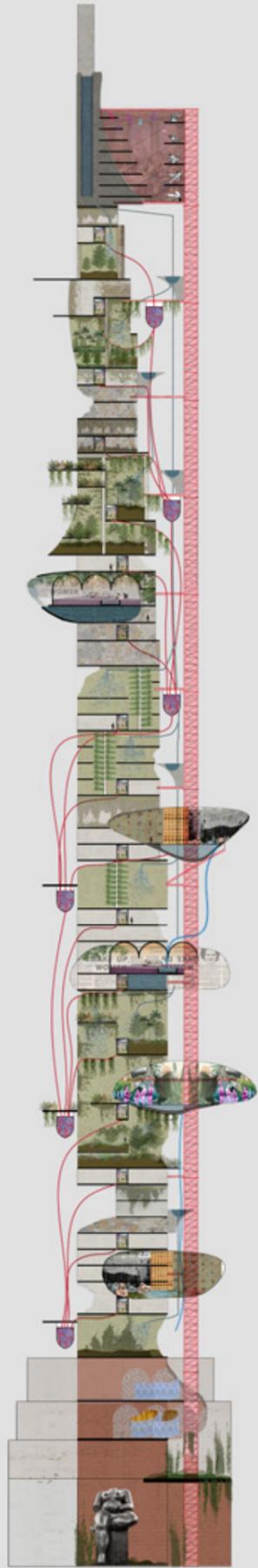
TERRITORIAL DISPLACEMENT

Human displacement due to the climate crisis as of 2018 in territories across the world.*



One of the major consequences of the Climate Crisis is the global displacement and migration of people, due to the loss of their environments and homes. This Crisis compounded political instability, economic strife and violence disproportionately affects women and their dependants.

According to the Georgetown Institute for Women Peace and Security out of the current 26 million people displaced, 76 percent (20 million) are women. And these numbers are meant to rise exponentially to 1 billion people by 2050, as reported by the International Organization for Migration.



Process collage



Sexual liberation collage



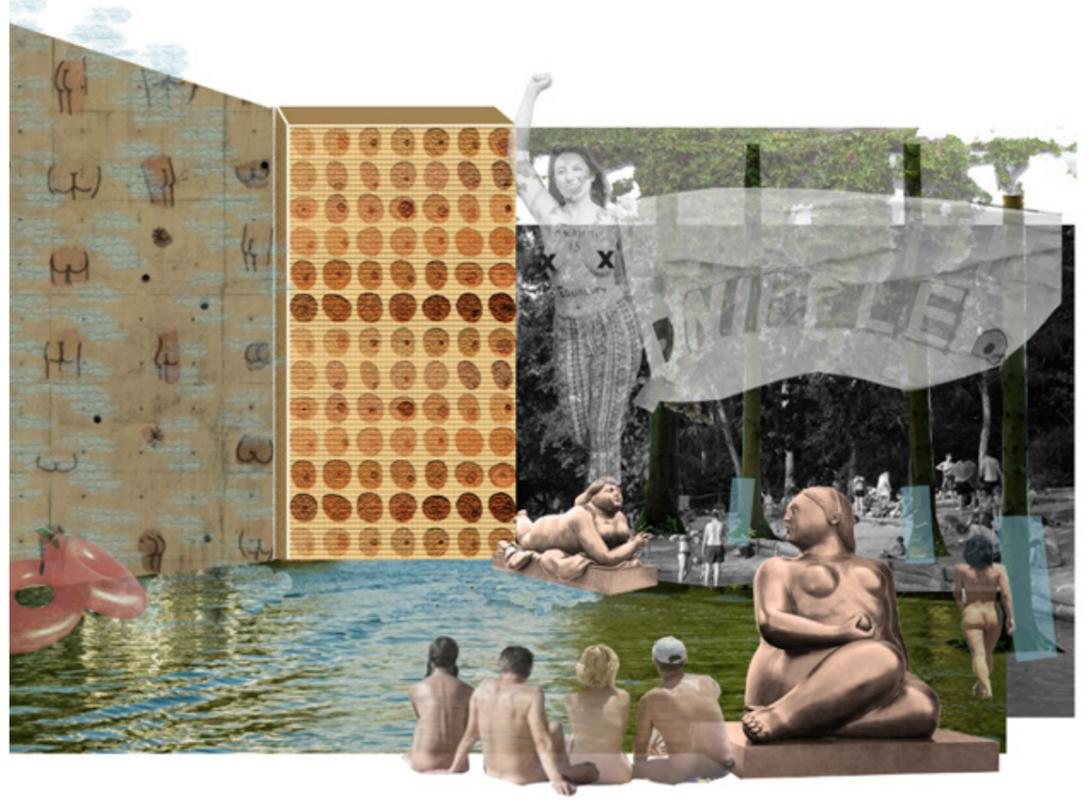
Safe street collage



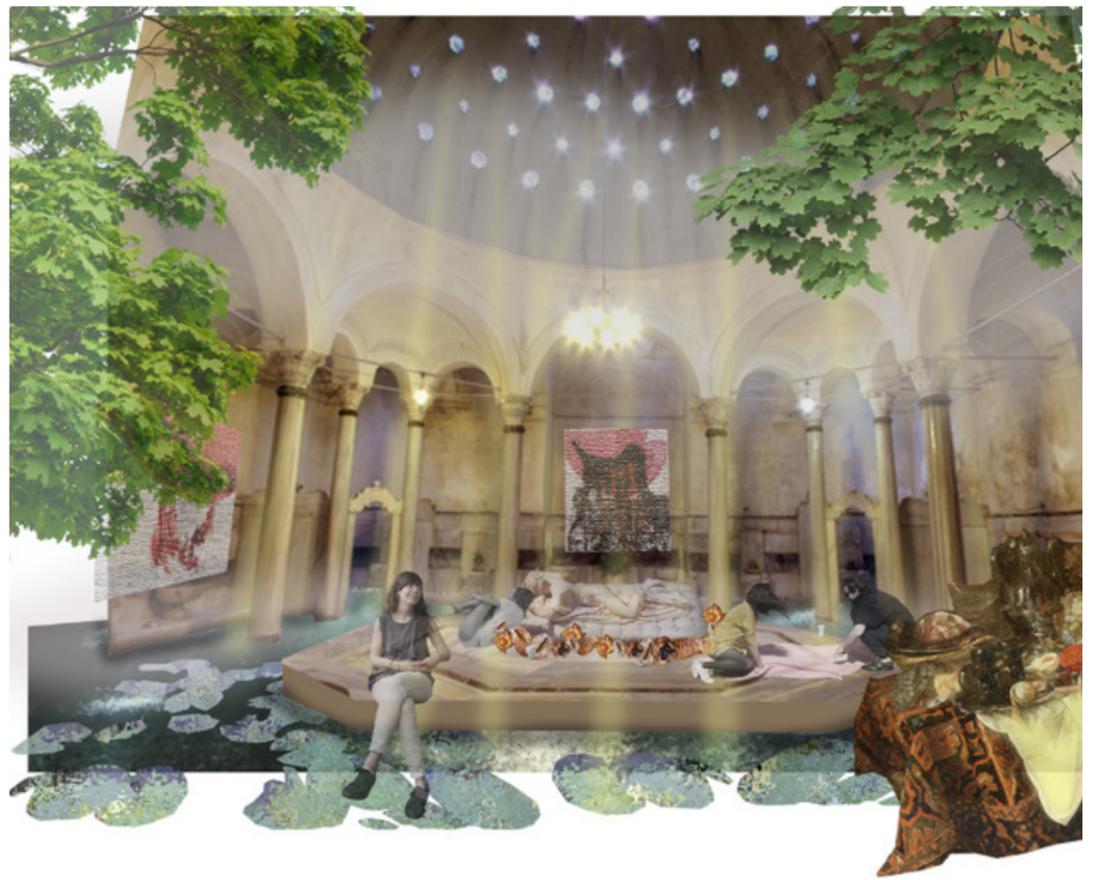
Non-gender clothes



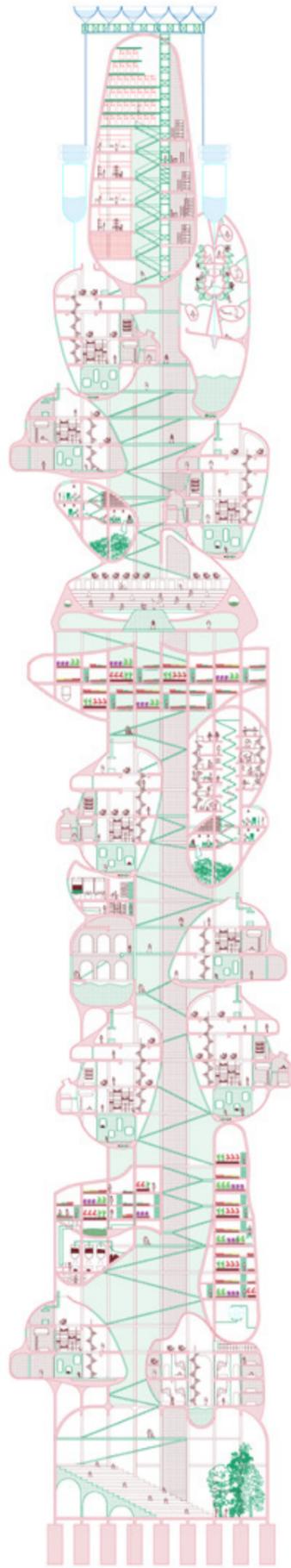
Abortion clinic



Liberation lake

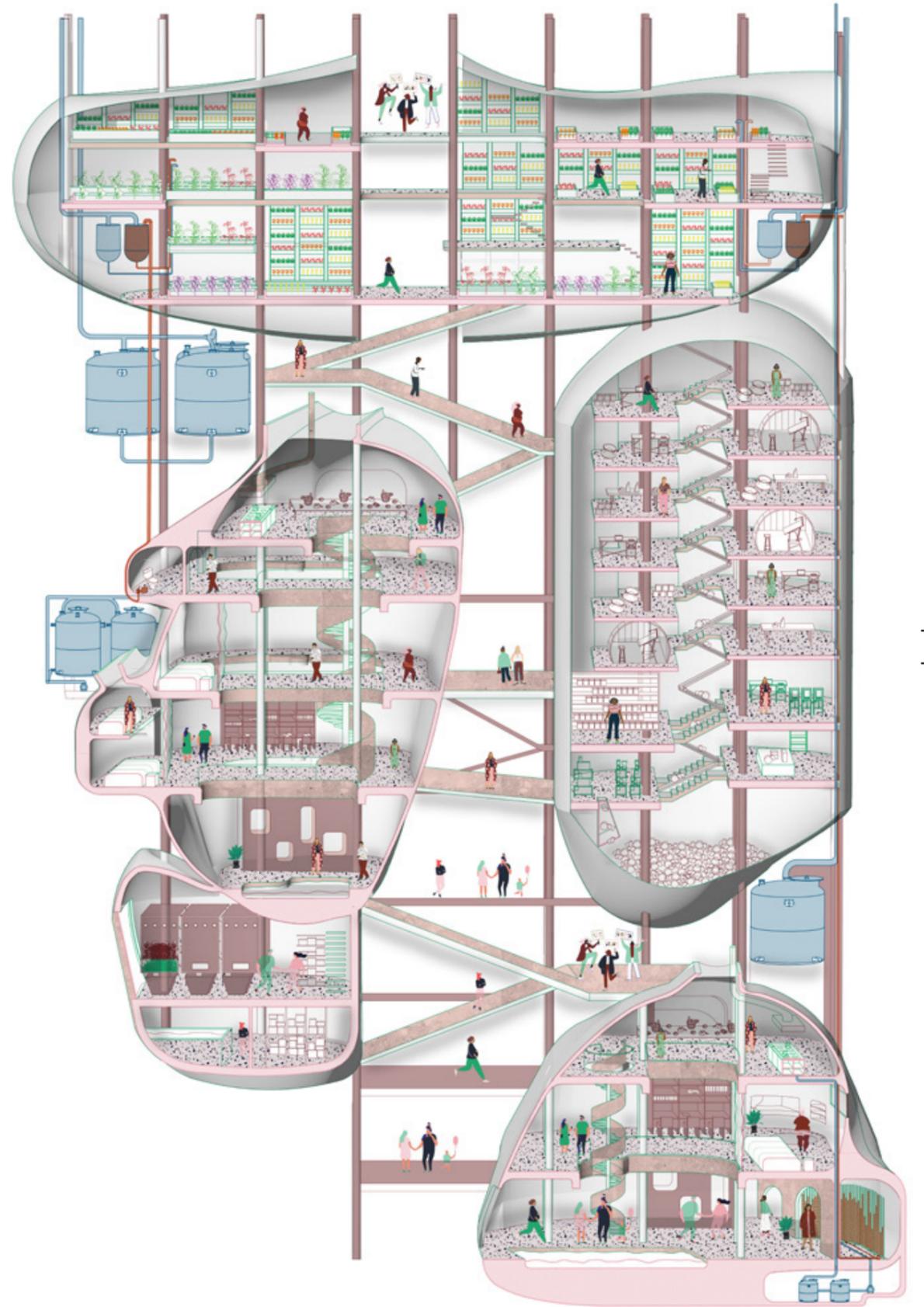


Menstruation room

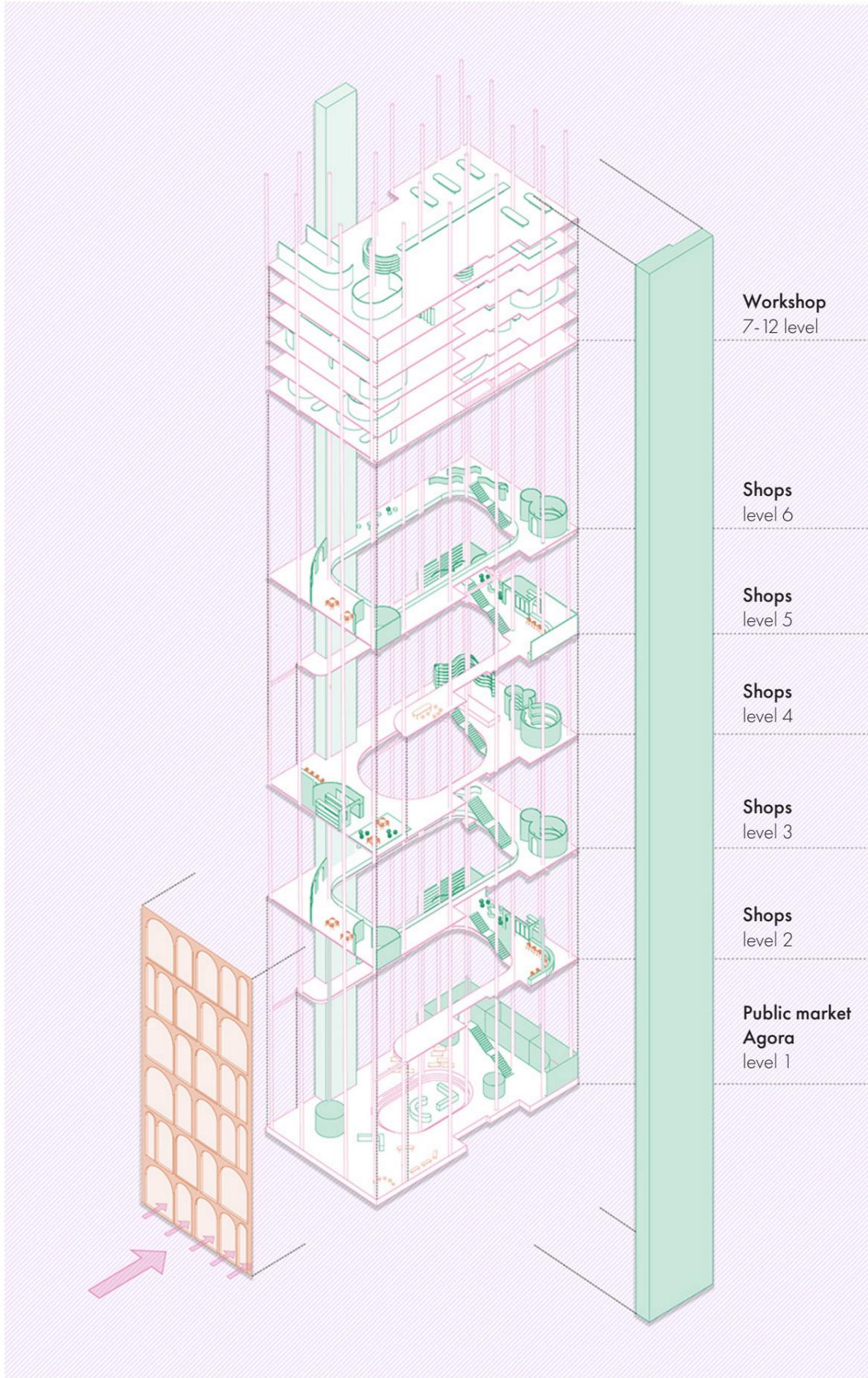


The first approach to the tower was the creation of this section that includes spaces of living attached to farms that produce the food and waste treatment plants. Spaces like an agora provide the community with a safe environment for debate and free speech. The creation of work stations and a research lab, provide the building with the possibility of an economic independence while empowering the women in it.

Process section



Process perspective

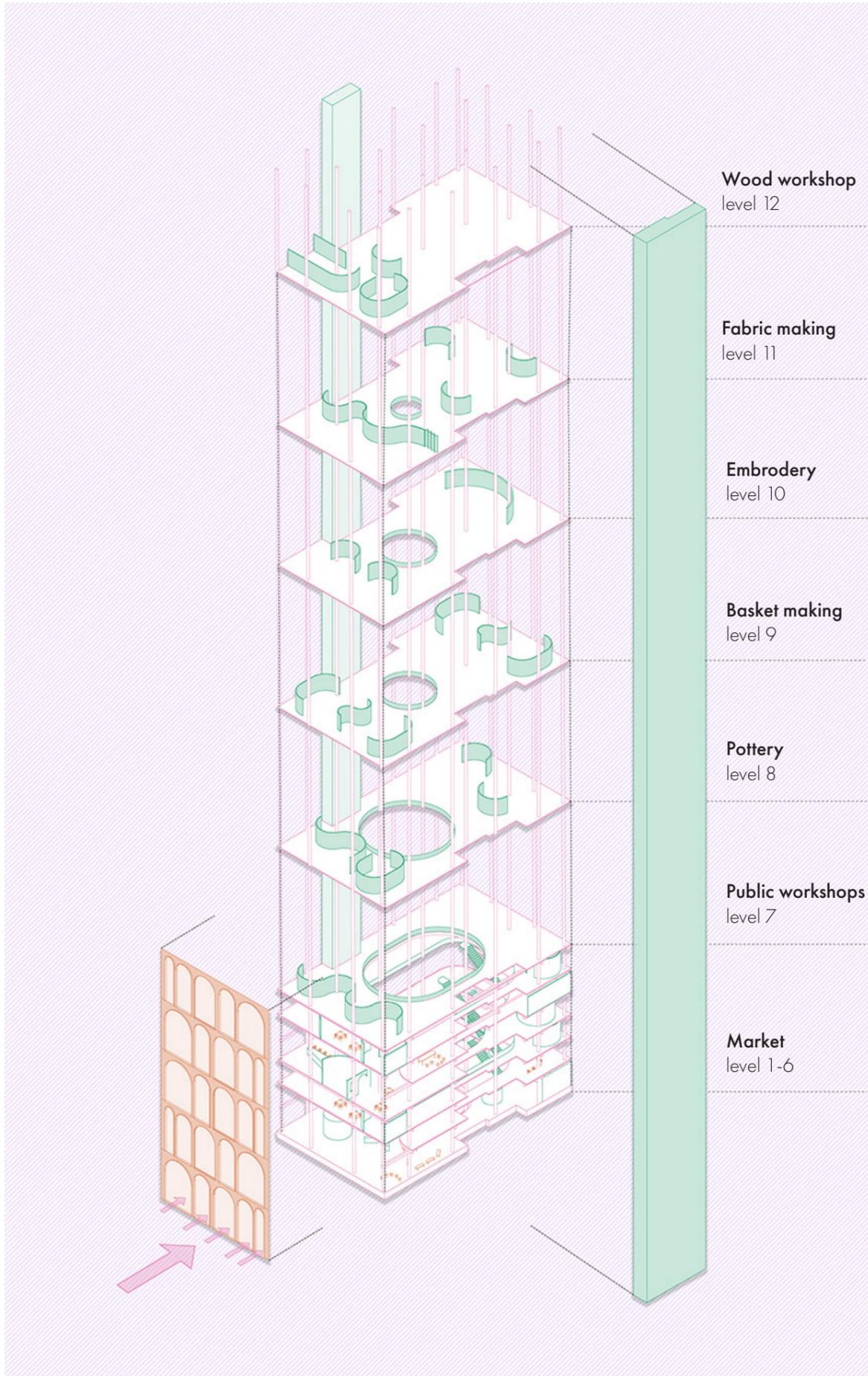


Market Axo

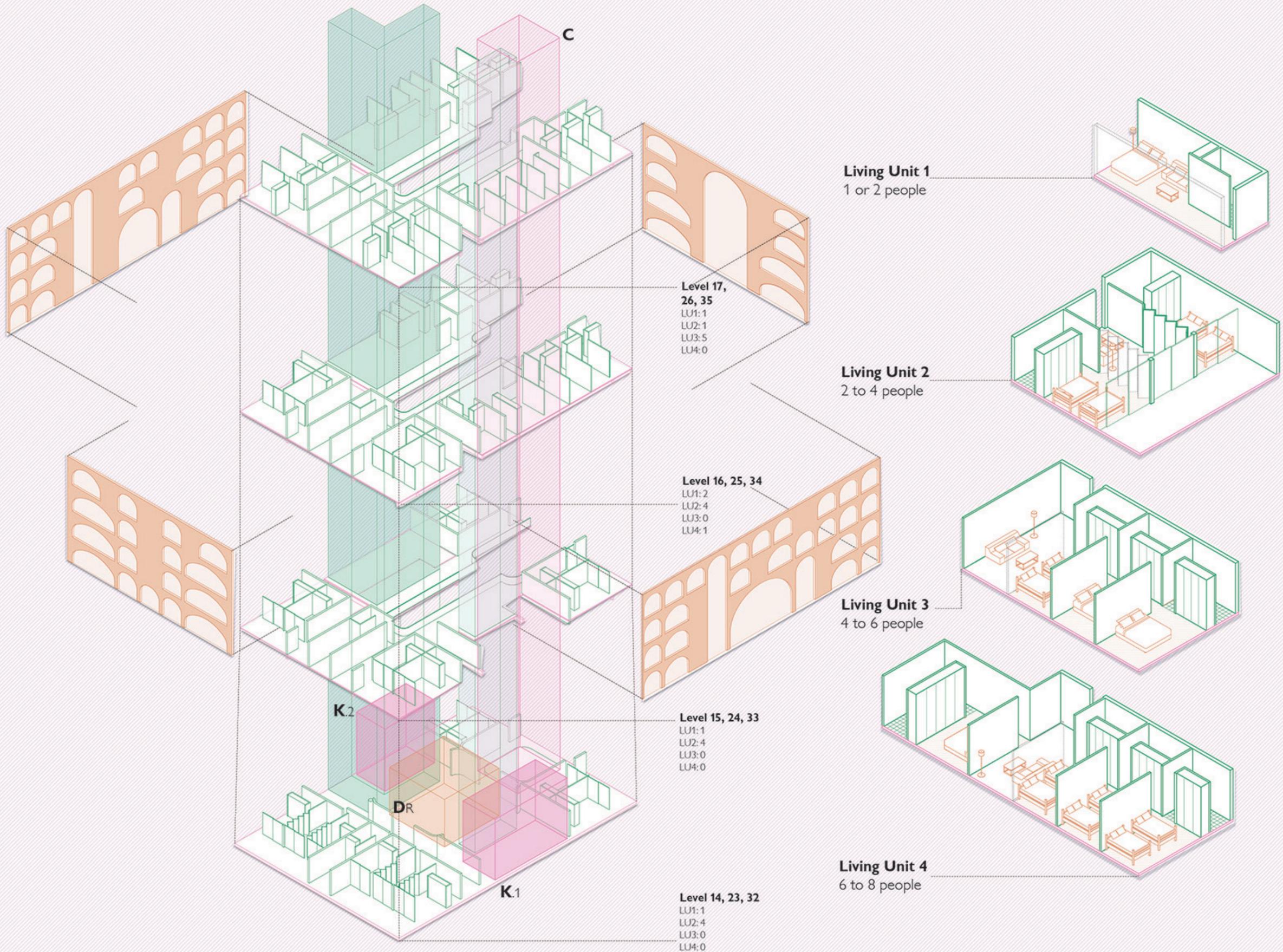


Market render







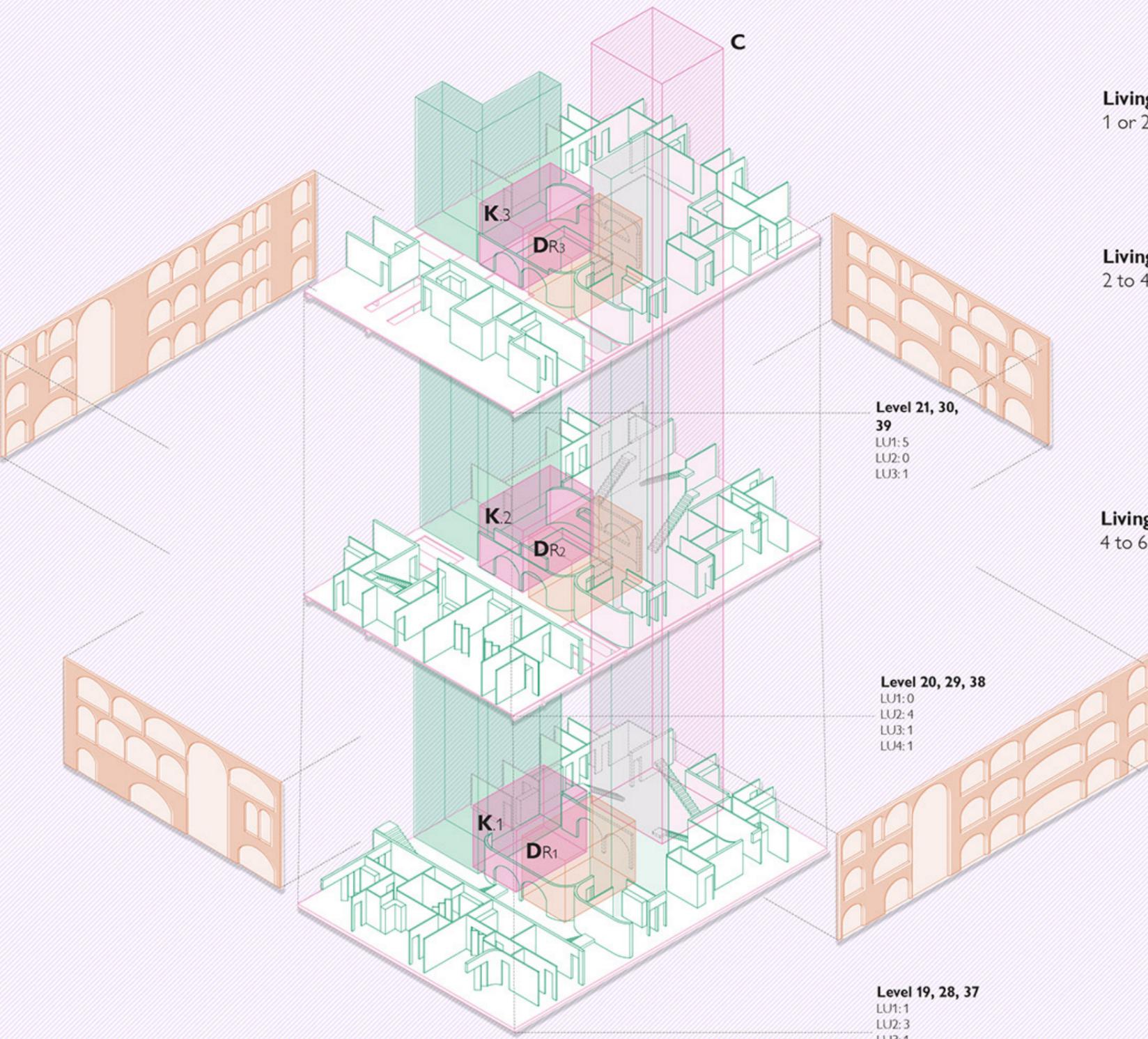




Living type A



Living type B

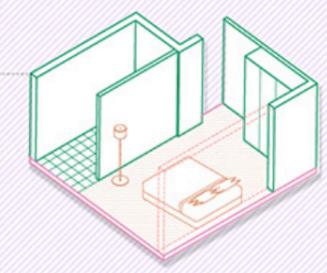


Level 21, 30, 39
LU1: 5
LU2: 0
LU3: 1

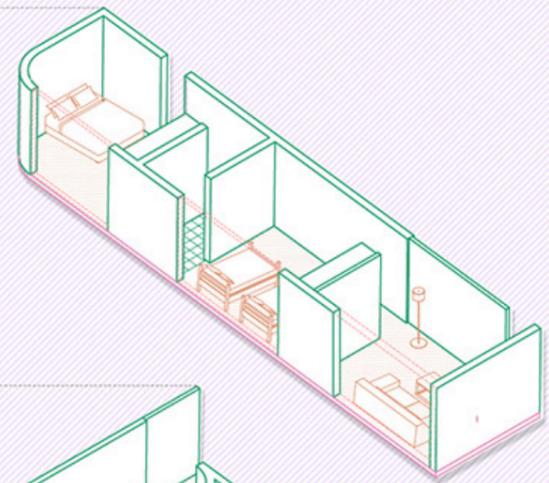
Level 20, 29, 38
LU1: 0
LU2: 4
LU3: 1
LU4: 1

Level 19, 28, 37
LU1: 1
LU2: 3
LU3: 1
LU4: 1

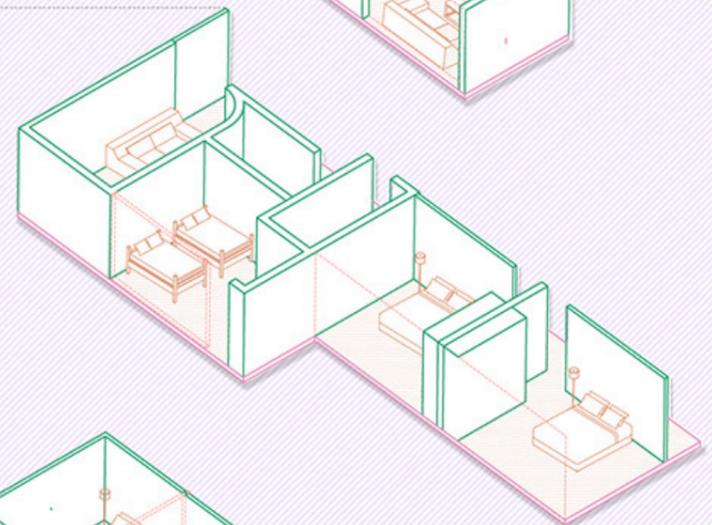
Living Unit 1
1 or 2 people



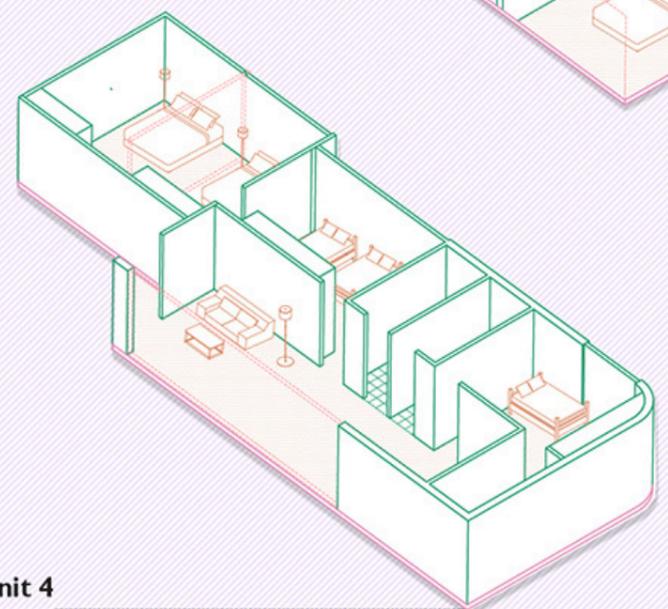
Living Unit 2
2 to 4 people



Living Unit 3
4 to 6 people



Living Unit 4
6 to 8 people





Mixer C

Many of the climate refugees displaced from the home countries, carry with them children that need to find a safe place while they sort their new life. Daycares are designed in order to provide a space for children where they will share with others going through the same. It will function with the help of the people living within the community and experts prepared for that duty. The daycare is combined with playgrounds in order to generate spaces for child entertainment. These types of infrastructures aim to create spaces for gathering and collecting with the diversity of the community.



Mixer A

With a sense of togetherness, the reproduction rights space it's created for empowering women to take control of their bodies and end the submission of the patriarchy. In here, every woman will be free to seek a safe abortion, learn about birth control methods or plan parenthood, always being able to find a support system of women and specialists if needed respecting the privacy of each other. In addition to these spaces, the need to profess a religion it's fulfill by the creation of a non denominated worship environment in which every religion shares it and lives together in a responsible and respectful way.



Mixer B

Another interconnected social mixer includes a theater in which the neighbors can showcase any talent or can be used as a free space to share ideas and generate a debate. A small garden which is taken care of by the people, generates a sense of responsibility and duty that helps the healing process of many of them.

Individual spaces are created for women to move freely and empower themselves through grooming areas, gathering spaces and a pool. All of these interact with one another and create a safe environment that encourages the women to interact with each other without any concern or fear.



Mixer B long

On the top of the building, this mixer includes also gathering spaces for the community that are repeatedly appearing throughout the building, in addition to a pool. The notion of a water space for entertainment or relax and the close relationship that many cultures of the refugees have with it.

In addition to these, a food space in which all the culinary traditions can be explored and shared through cooking together and trading goods with each other combining cultures and flavours. Communal spaces for sharing any use that the women wish to perform, are displayed to generate the notion of lifting the burden they carry with.





RETHINKING EVIDENCE

My Lai, the massacre and the cover-up. My research tries to understand and give an architectural response, on how this military mission became one of the biggest massacres and cover-ups in US army history.

The project tries to create a series of interventions throughout the existing War Remnants Museum in Ho Chi Minh. Understanding and acknowledging the complexity and articulation of the war crimes committed, these spaces focus on how the body engages with the evidence and the different layers of comprehension that they imply.

Facing the person with a complex understanding of the different pieces of evidence involved, the variety of critical operations hopefully helps the visitor's perceptions of the violence and crimes that these documents carry.



Pictures taken by Haeberle, army photographer, who presented the image in black and white to the authorities during the My Lai Inquiry conducted by the Pentagon. The color image was held by him in order to cover up the atrocities



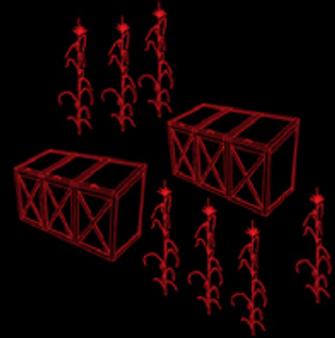
WEAPONS



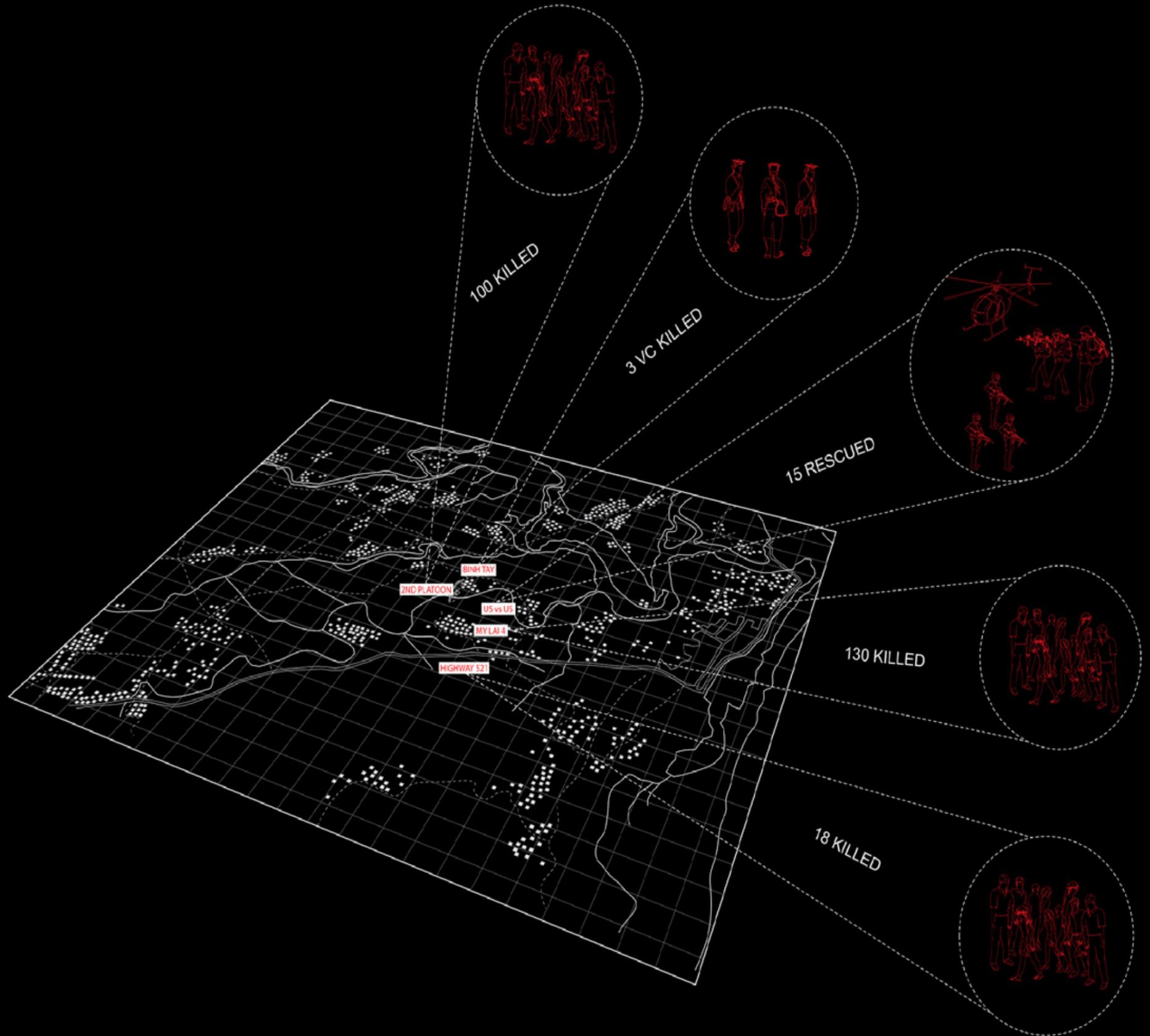
AMMUNITION

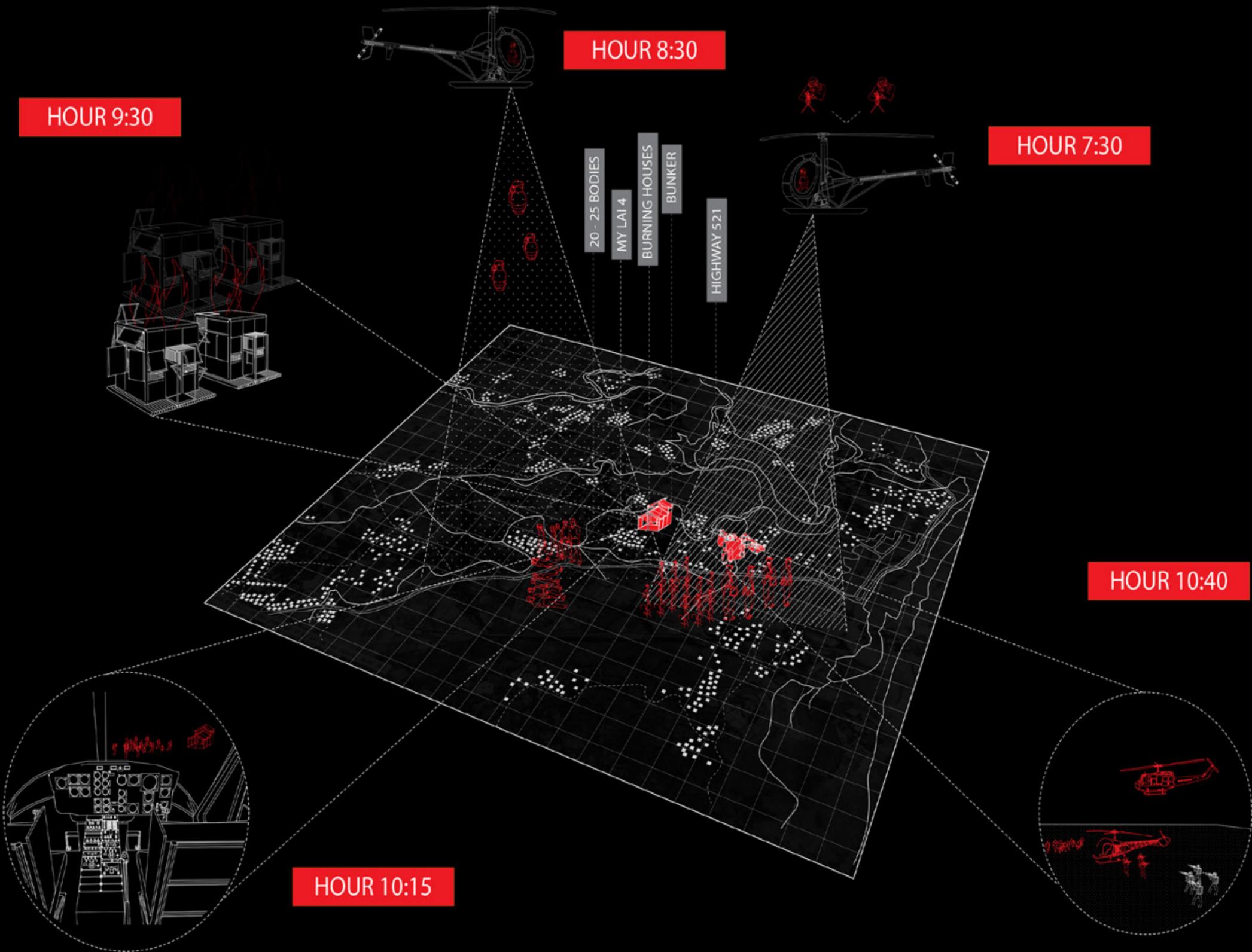


MILITARY EQUIPMENT

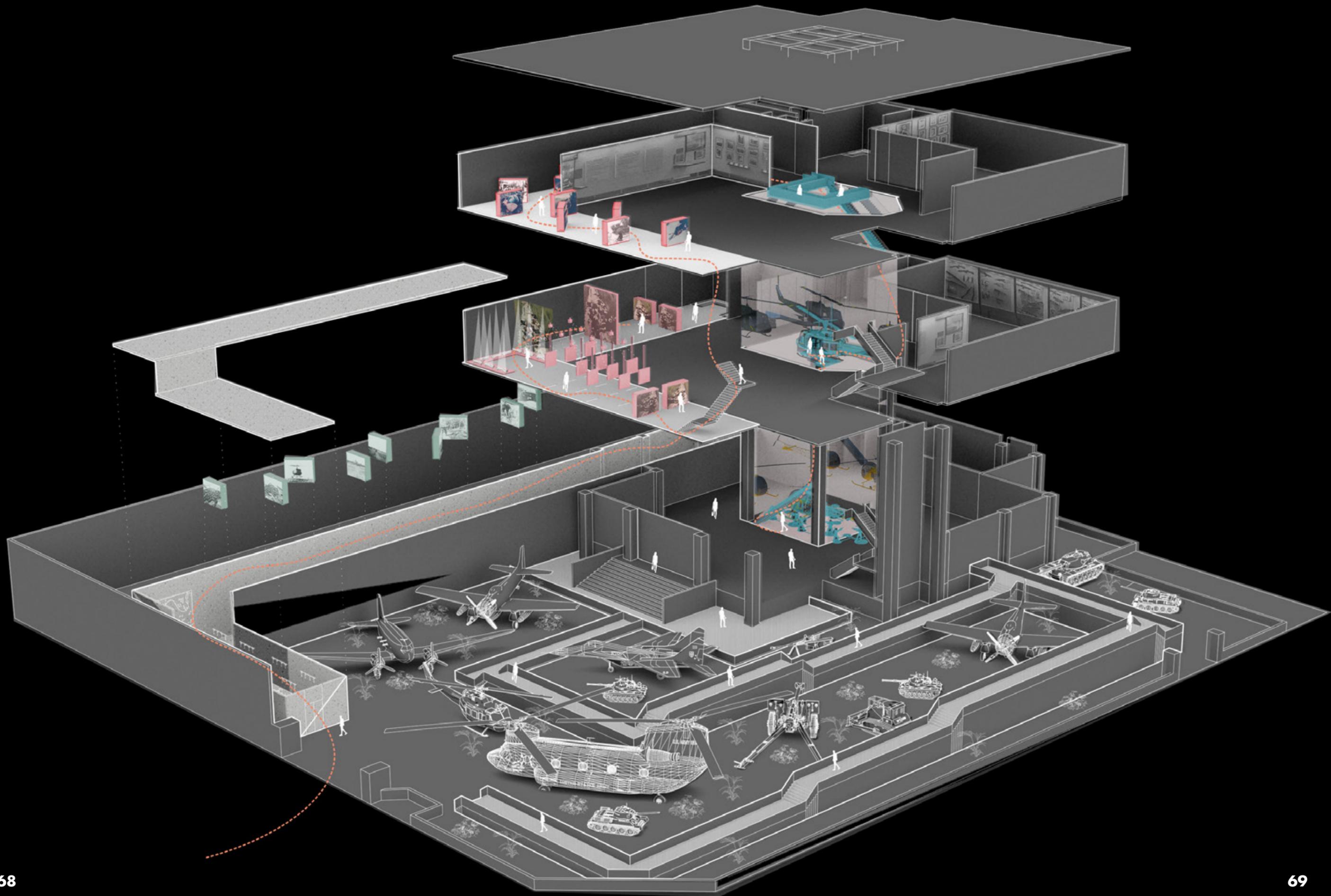


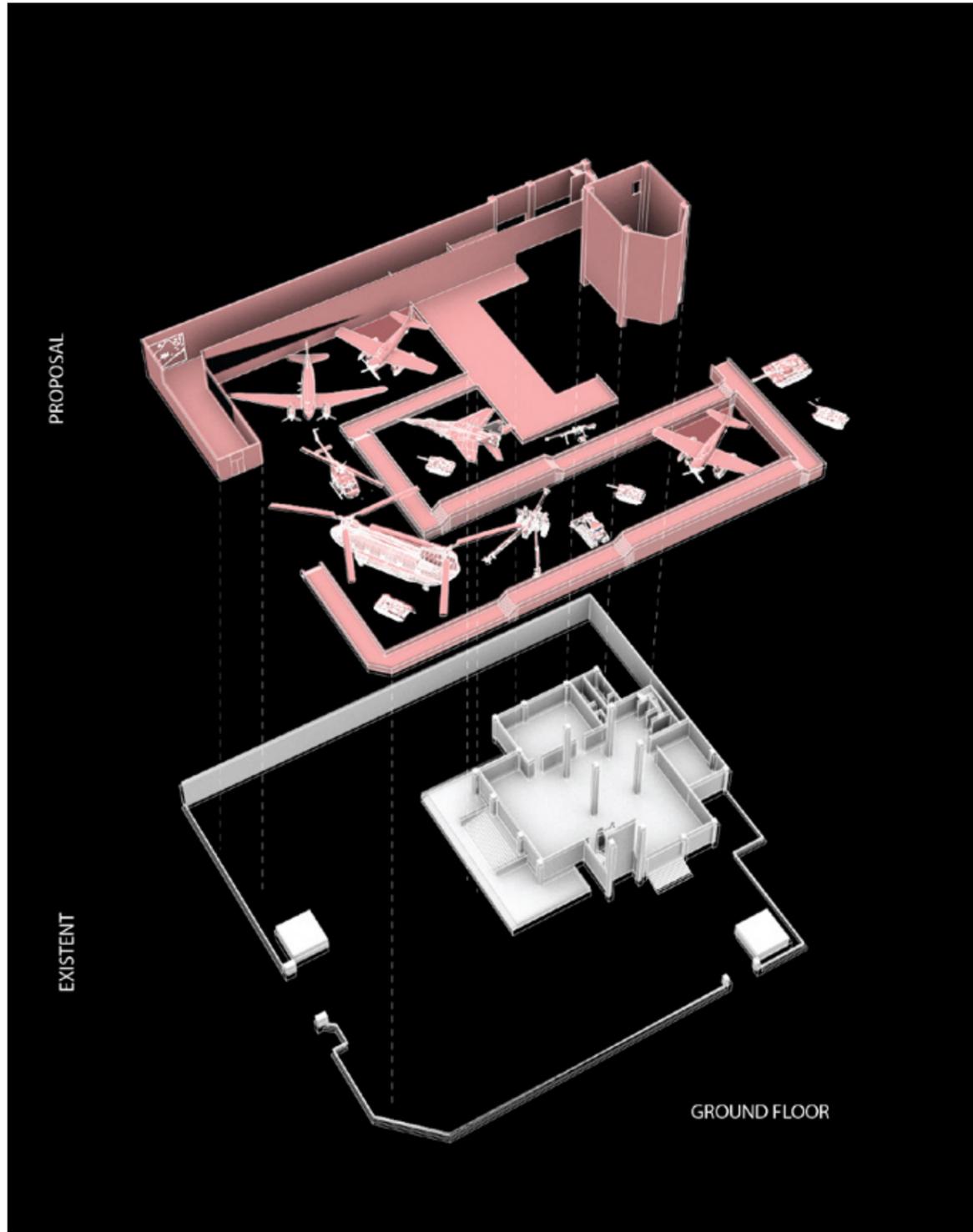
FOOD STOCK



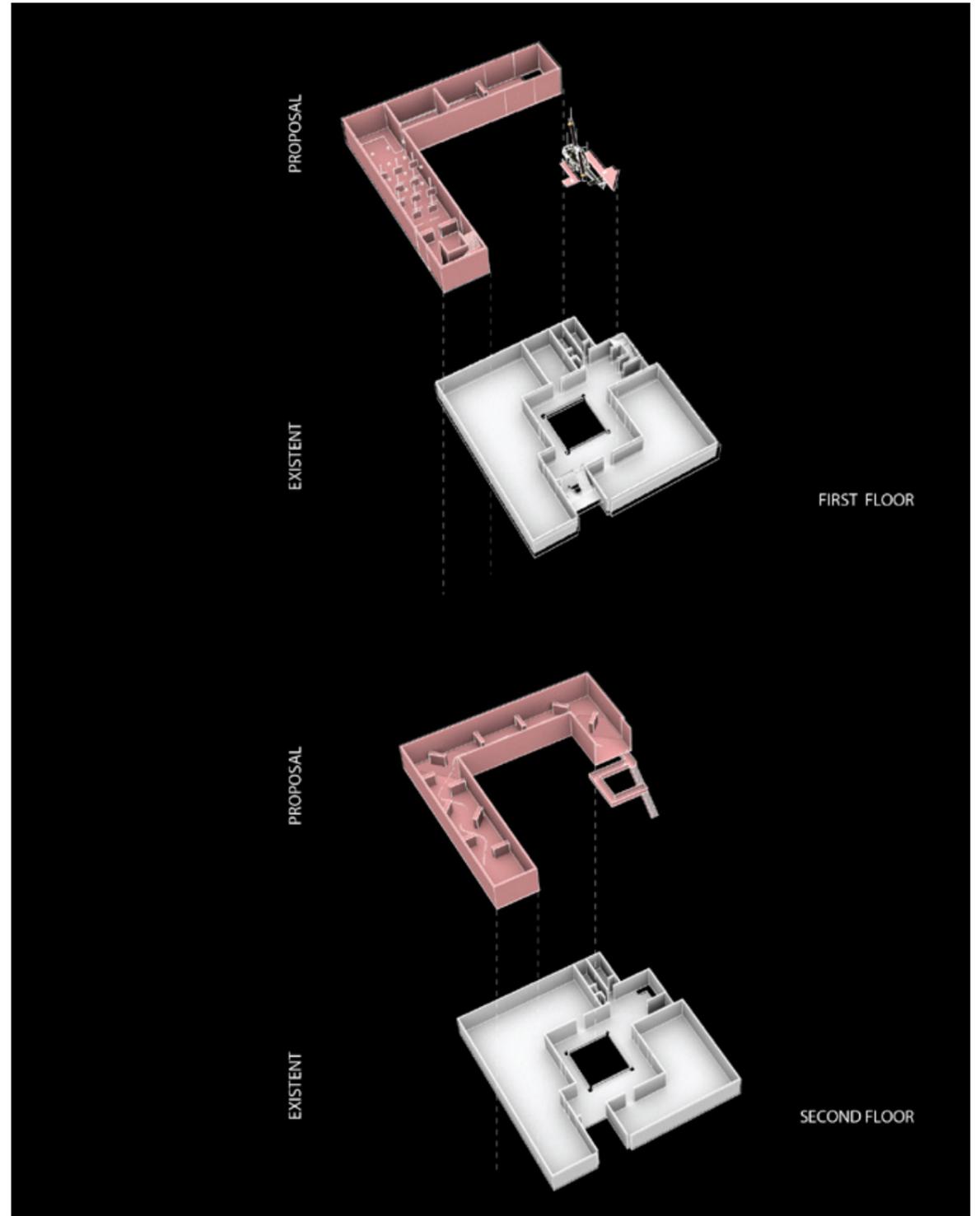


Landing of Lt. Thompson that ended up in the confrontation between US soldiers in an attempt to stop the killings. This intervention played a key role in the aftermath of the massacre as it was the only witness report of the war crimes committed.



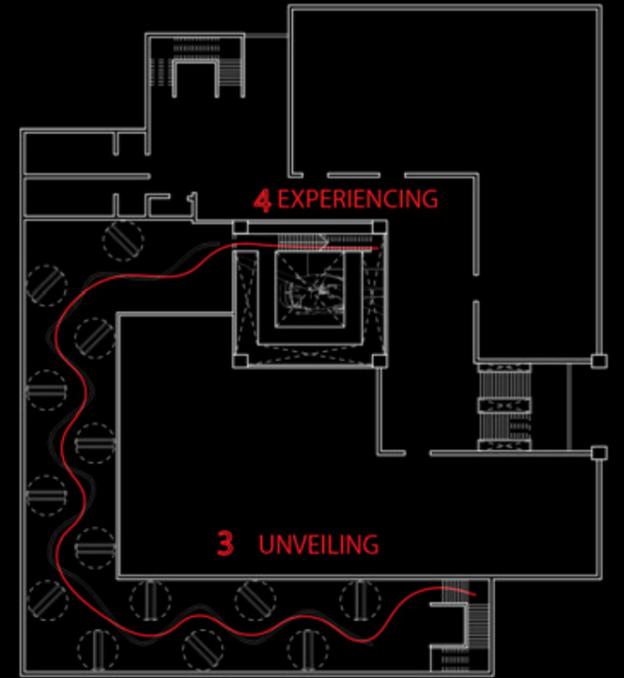
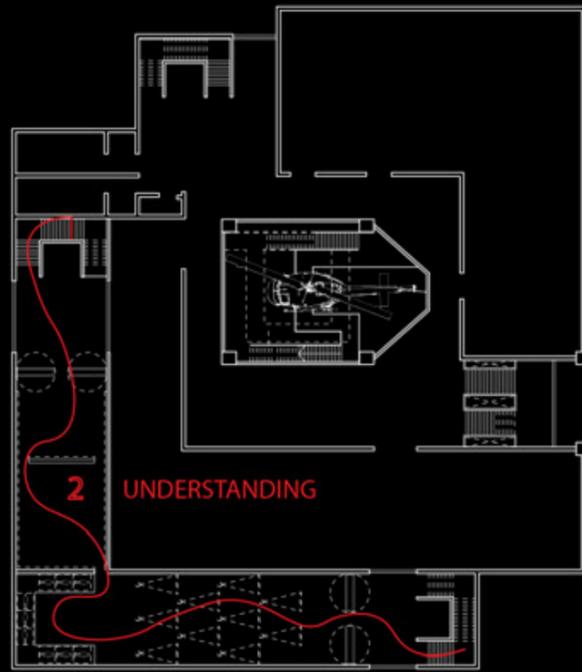
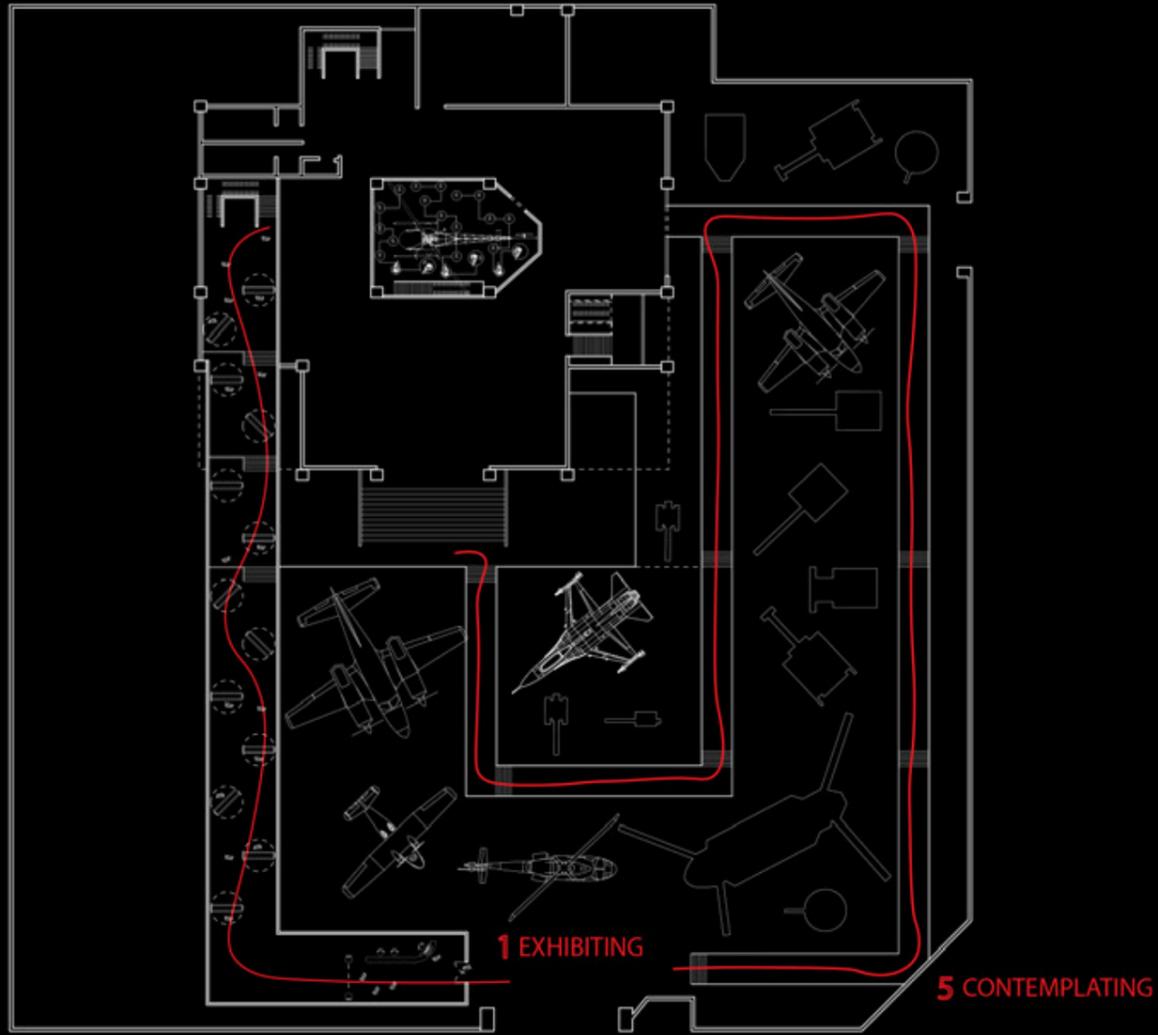


Proposal



Proposal

The existing museum showcases many documents, artifacts and war photos. The objective of the project is to add value to the existing museum by creating this system of understanding and unpacking of the evidence to later reencounter with the current display. The images described before are contained in a spiral path that goes from the ground floor to the top one. With the same premise of continuous path, the rescue mission is displayed in an enclosed room that connects every floor of the existing museum.

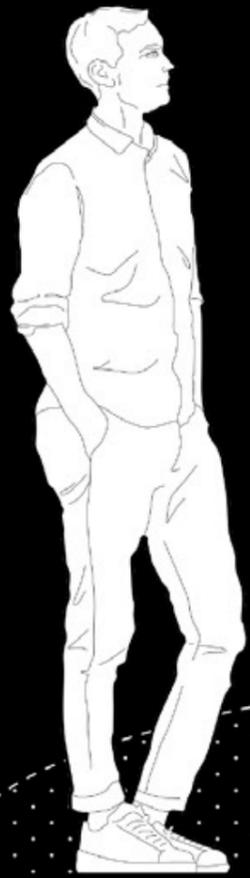


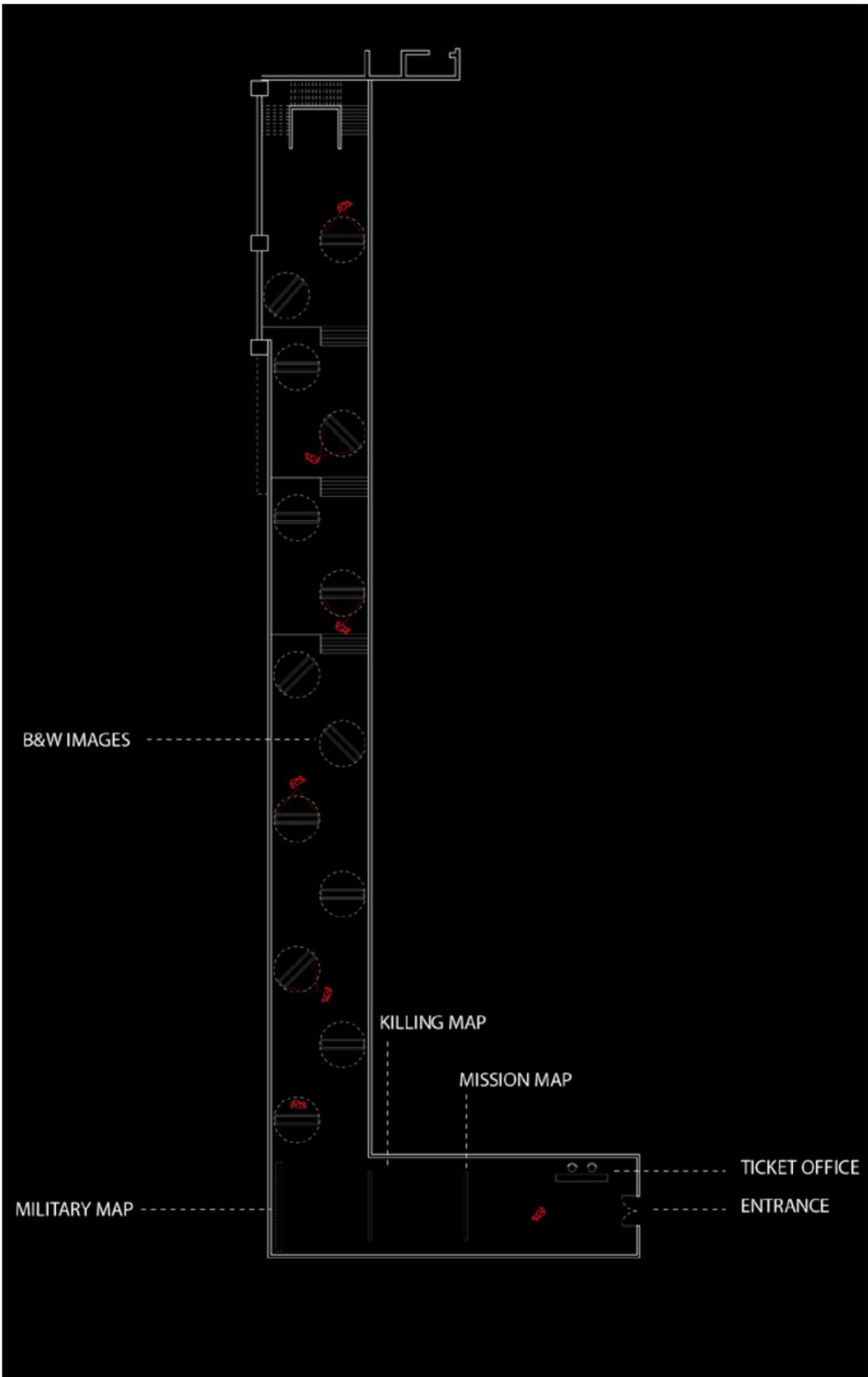
The importance of understanding the My Lai massacre as a whole event, translates into the proposed circulation to challenge the perception of the user. During the entire visit, different levels of comprehension are going to be laid out to the visitor. Starting with an exhibition of the evidence as the first approach, an understanding of what it is seen it is the next step, continuing with the unveiling of the evidence, experiencing the data by herself and concluding with a contemplation of the artifacts that helped commit these war crimes.



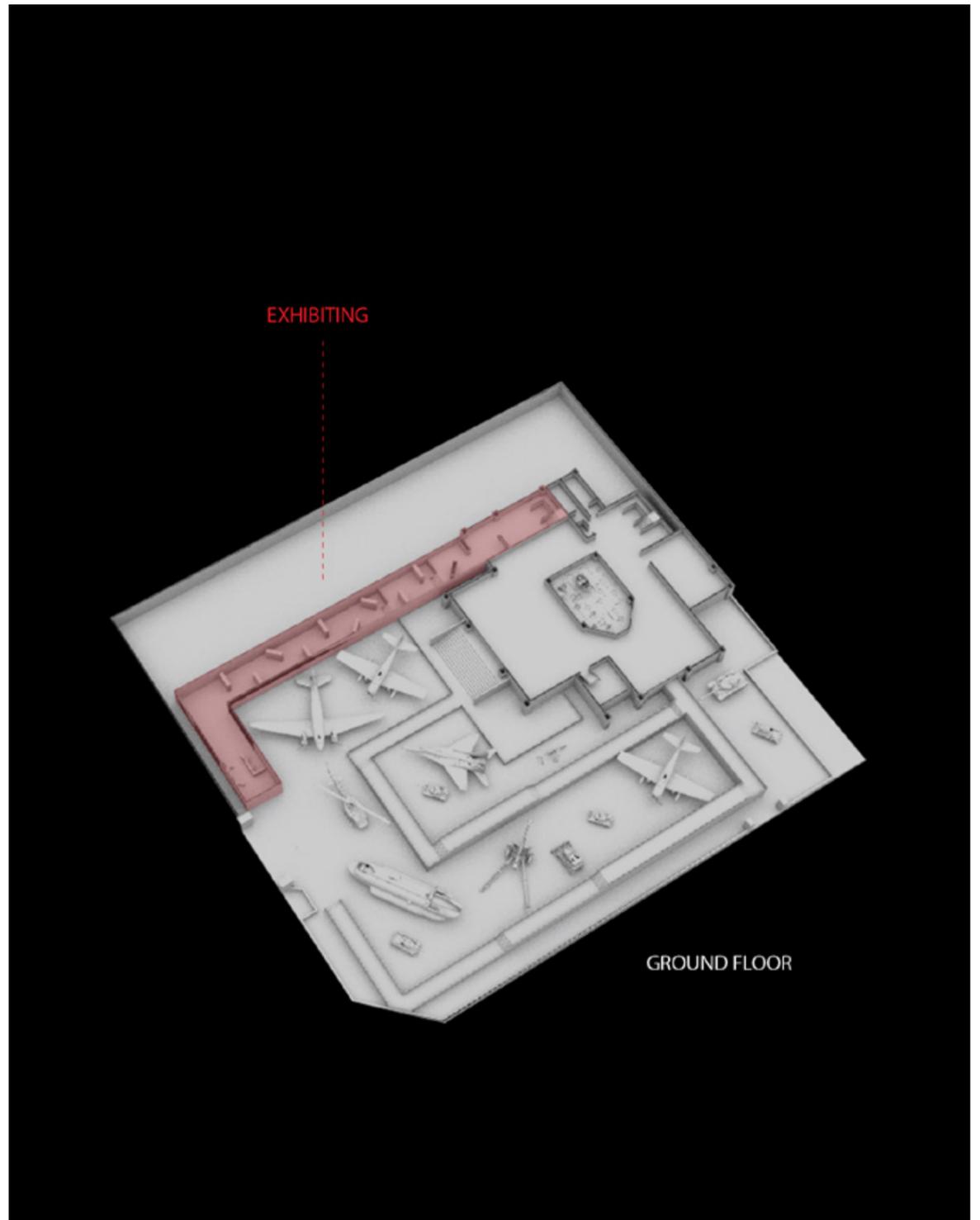
The creation of this device aims to help the display of the images in a different way. It is designed to carry two pieces of fabric that would hold the pictures and would allow the visitor to see through them in an attempt of creating a new technology of evidence recognition.

The device is integrated with a rotation system at the bottom that gives the visitor the opportunity to observe the pictures from different angles while participating in the process.

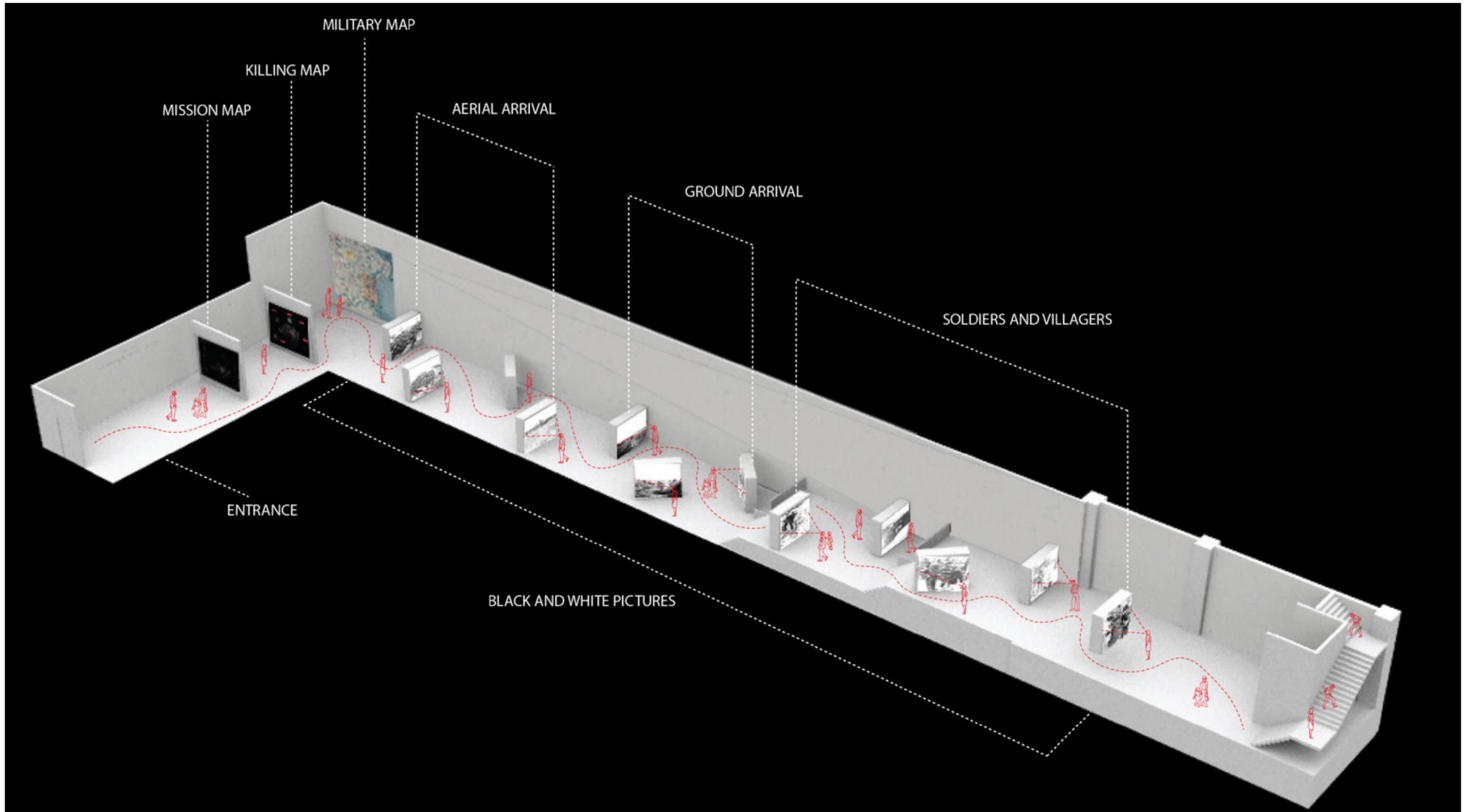




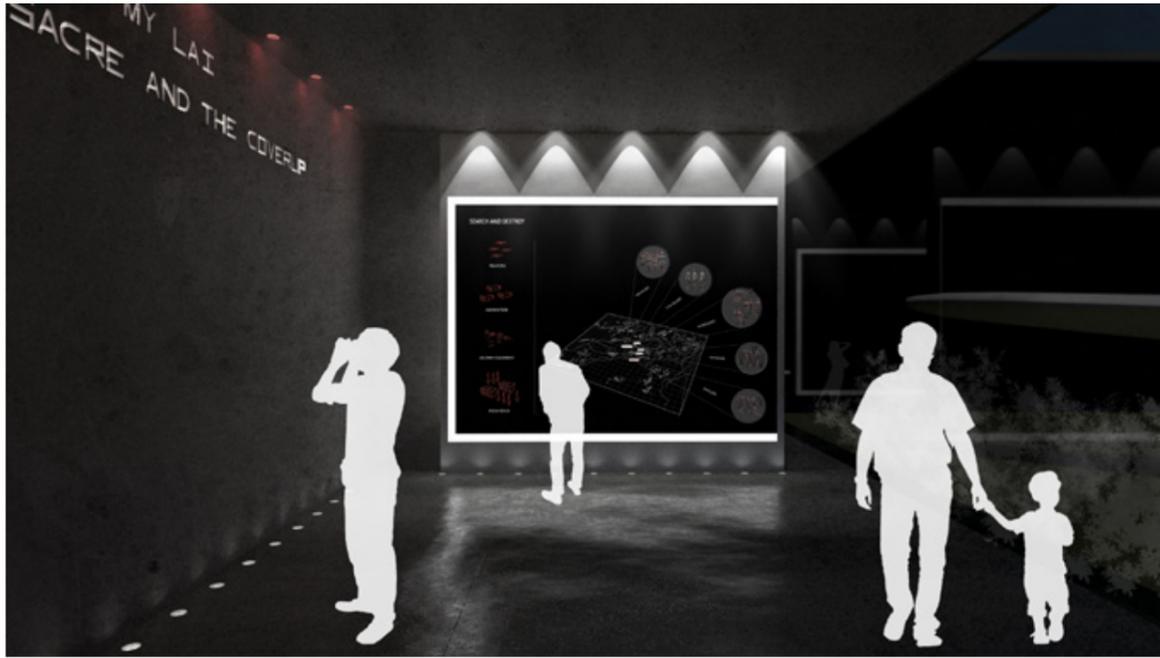
Scene 1 floor plan



The starting point of this evidence journey exhibits the black and white pictures that were initially presented to the authorities not showing any sign of the massacre.



While entering on the ground floor, the visitor is presented with different maps of the mission and the village to be placed into context. They explain the aim of the mission, how the killings occurred and the way in which the army produced those maps for the mission. The black and white pictures displayed are arranged according to the mission development, starting with the aerial arrival till the entry to the village.



Render map mission



Render map landing

Firstly, the visitor encounters with a brief summary of the search and destroy mission and the number of killings during the operation. Then, a detailed explanation of the intervention of Lt. Thompson is displayed in order to acknowledge every step of the rescue.

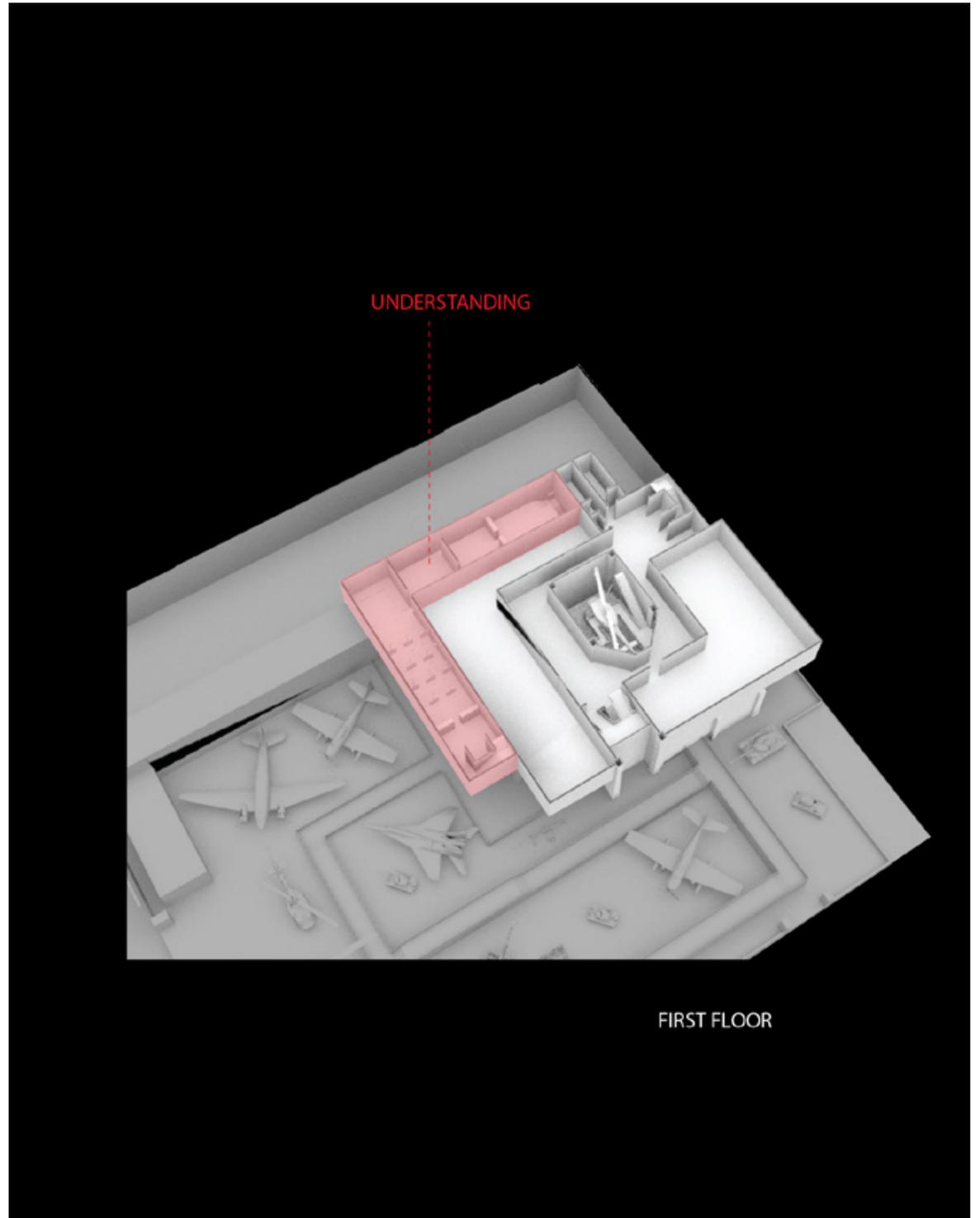


Render b&w pictures

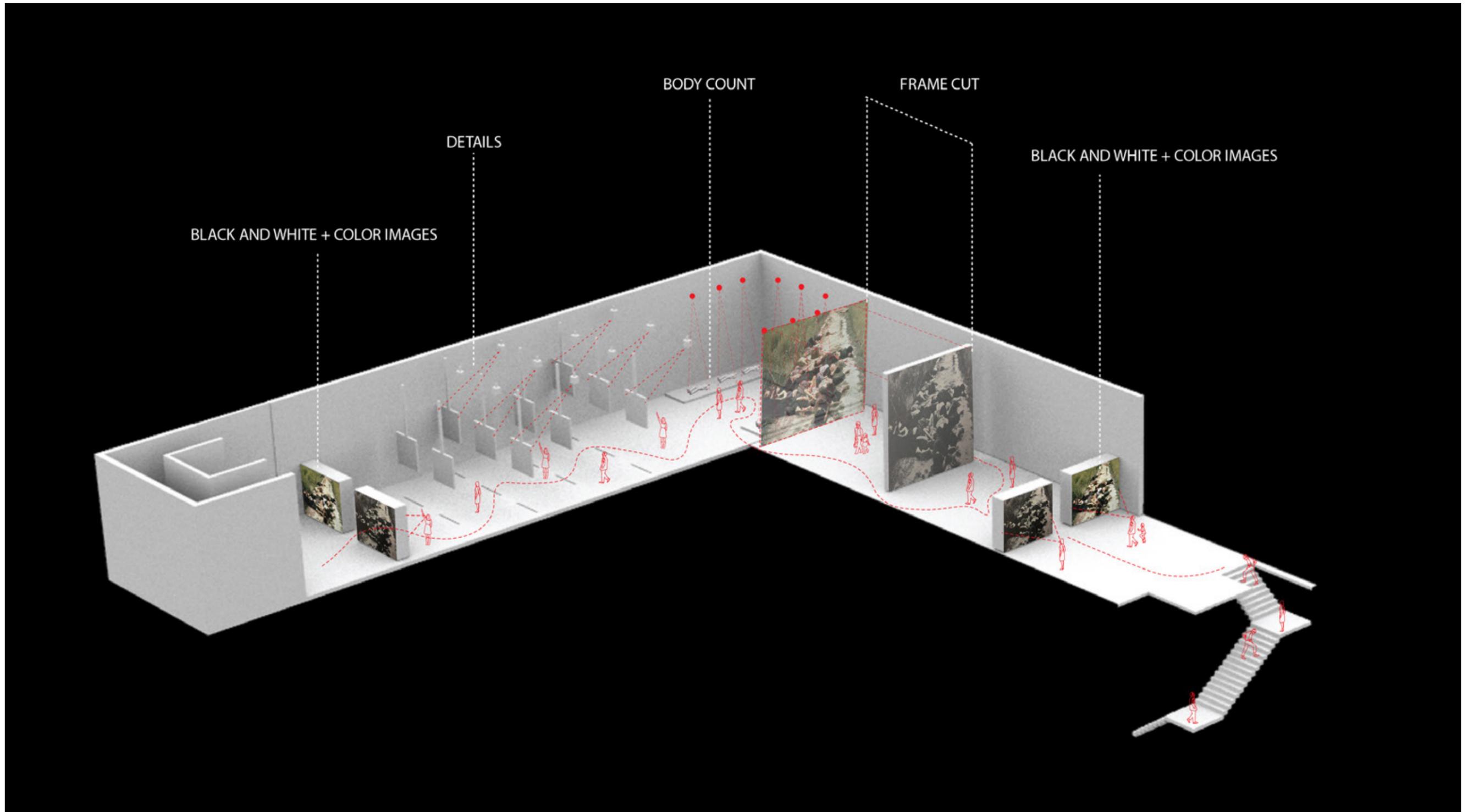
With the devices distributed along the path, the user starts to immerse herself into the museum. Different levels of opacity allow the person to have contact with the outside war machinery but keeping the darkness controlled.



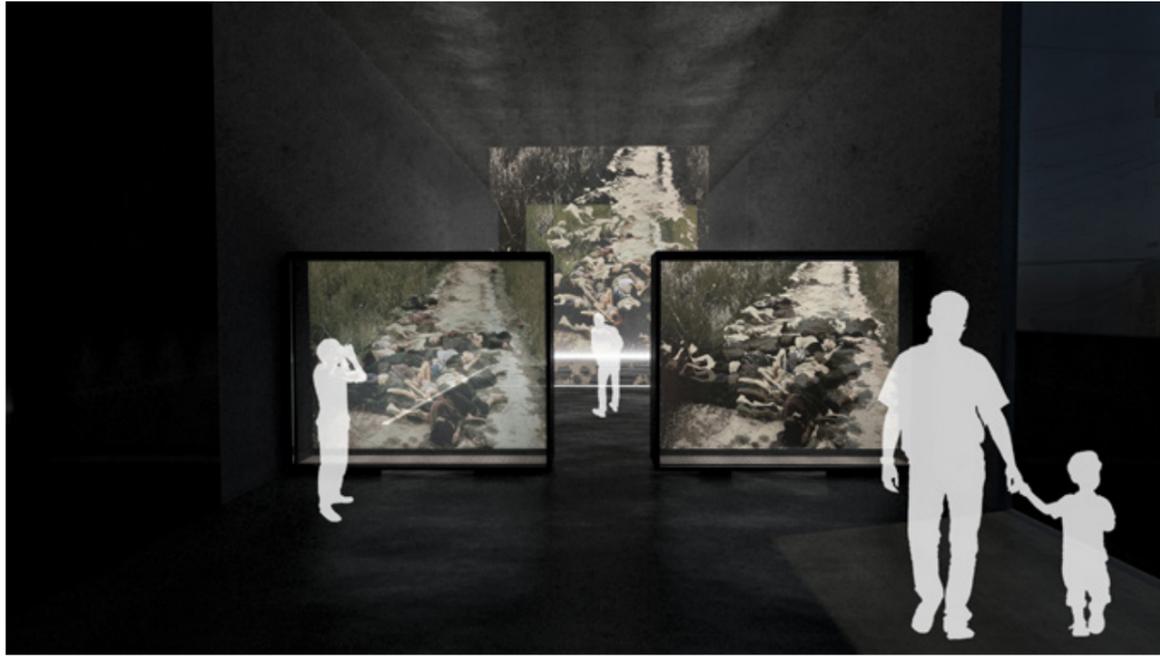
Scene 2 floor plan



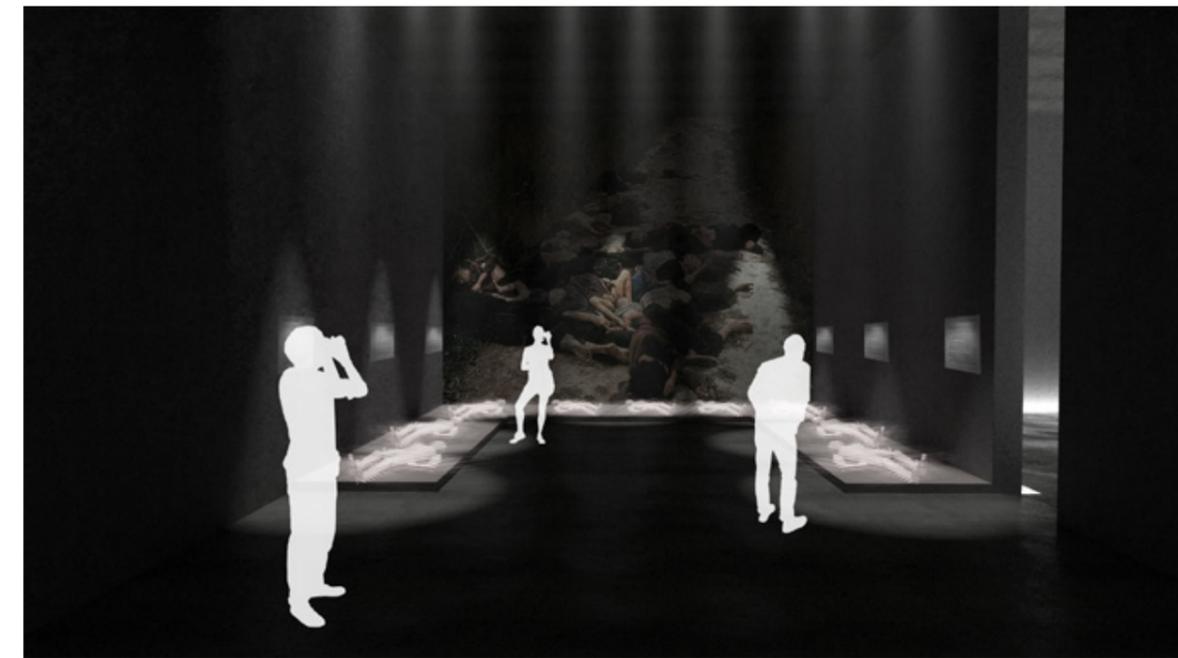
The second step is the inspection and detailed analysis of one of the pictures, in an attempt of fully understanding a piece of evidence and the complex techniques used to hide relevant information.



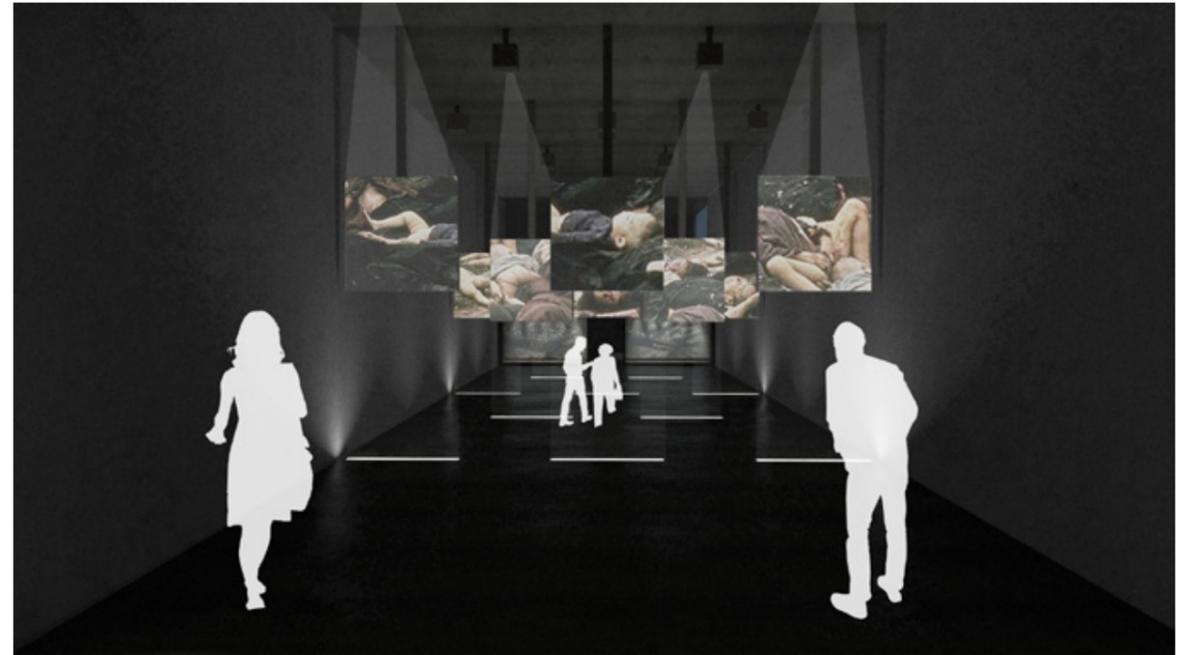
Different operations fill the room to provide the structure of display and comprehension. Comparing the color and non-color picture, the frame cut, body count and focus on details are some of the techniques used to create this space.



Render frame cut



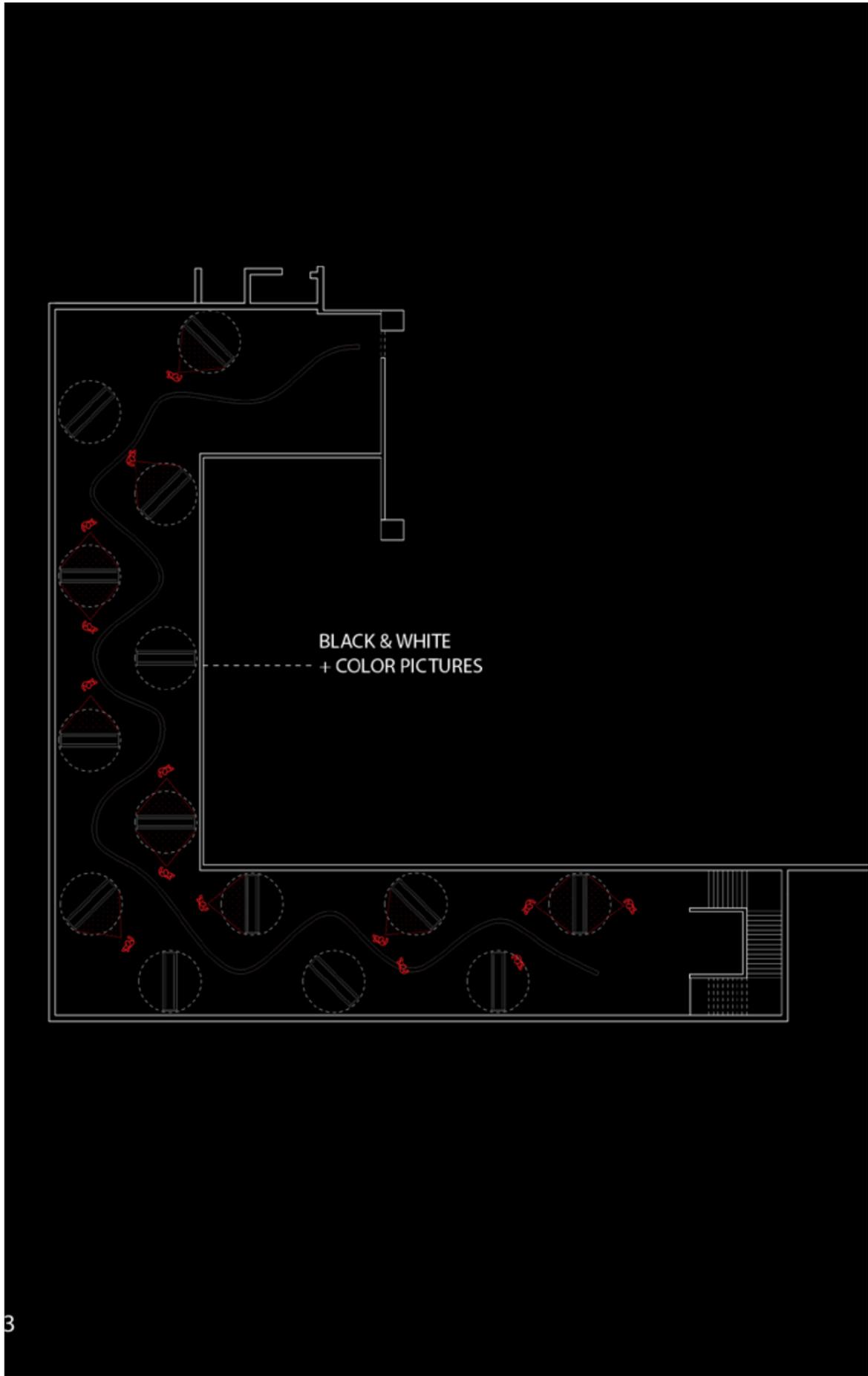
Render body count



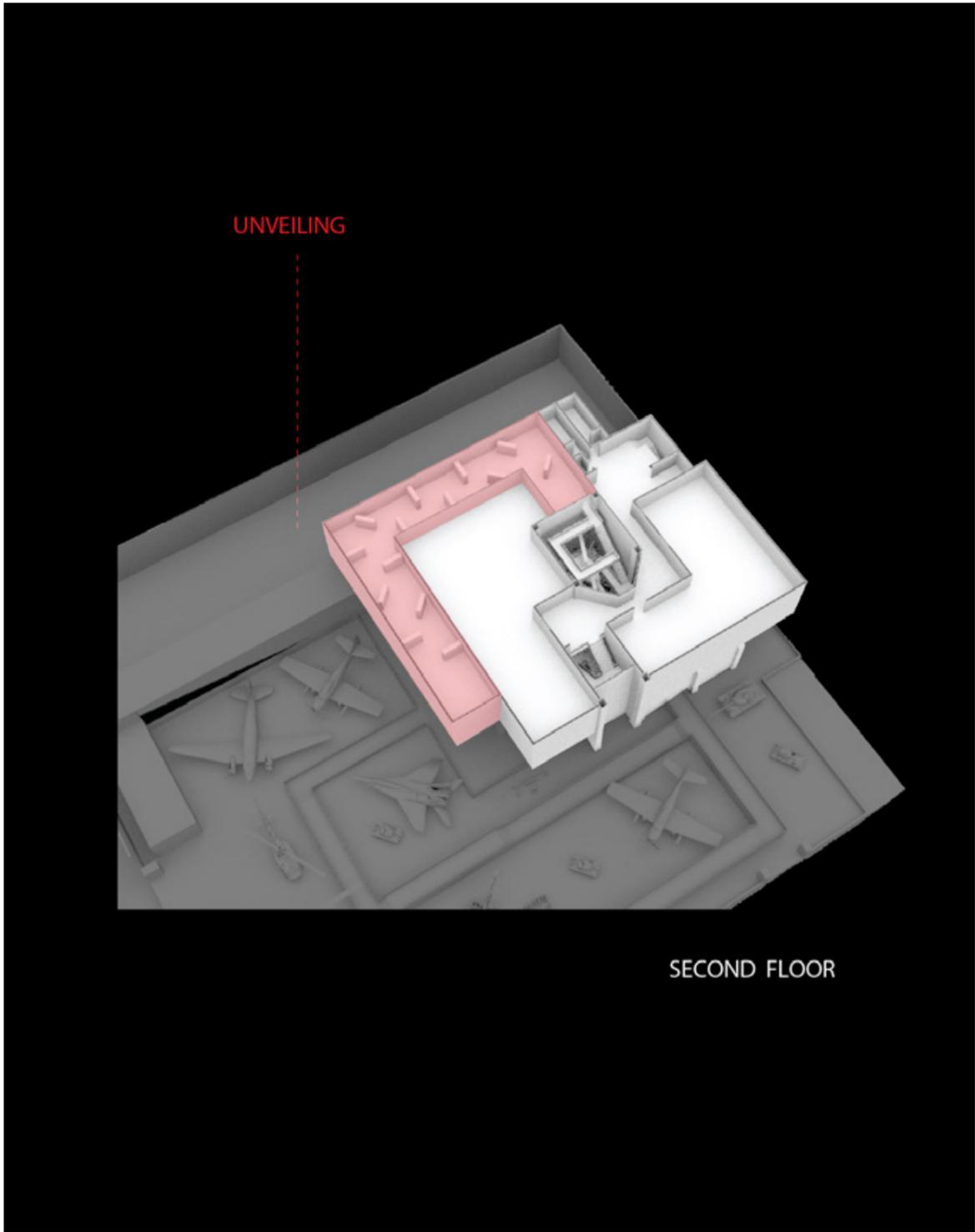
Render detailed panels

Devices showcasing the same picture in black and white and in color versions, try to clarify how the use of pigments served for the hiding of pieces of information. In addition to this, the same picture is contra positioned to unveil how the frame cut left bodies out of the photograph. Another key part of the image is the body count. The color picture allowed the investigators to try to determine who the victims were. The holograms of the bodies try to represent the number of casualties in the picture and give them recognition of their identities.

Many details in the photo expose the huge level of the cold blood of the soldiers that participated in the massacre. Panels are displayed to focus the attention into these details. The user is faced with specific and raw evidence of the murders.

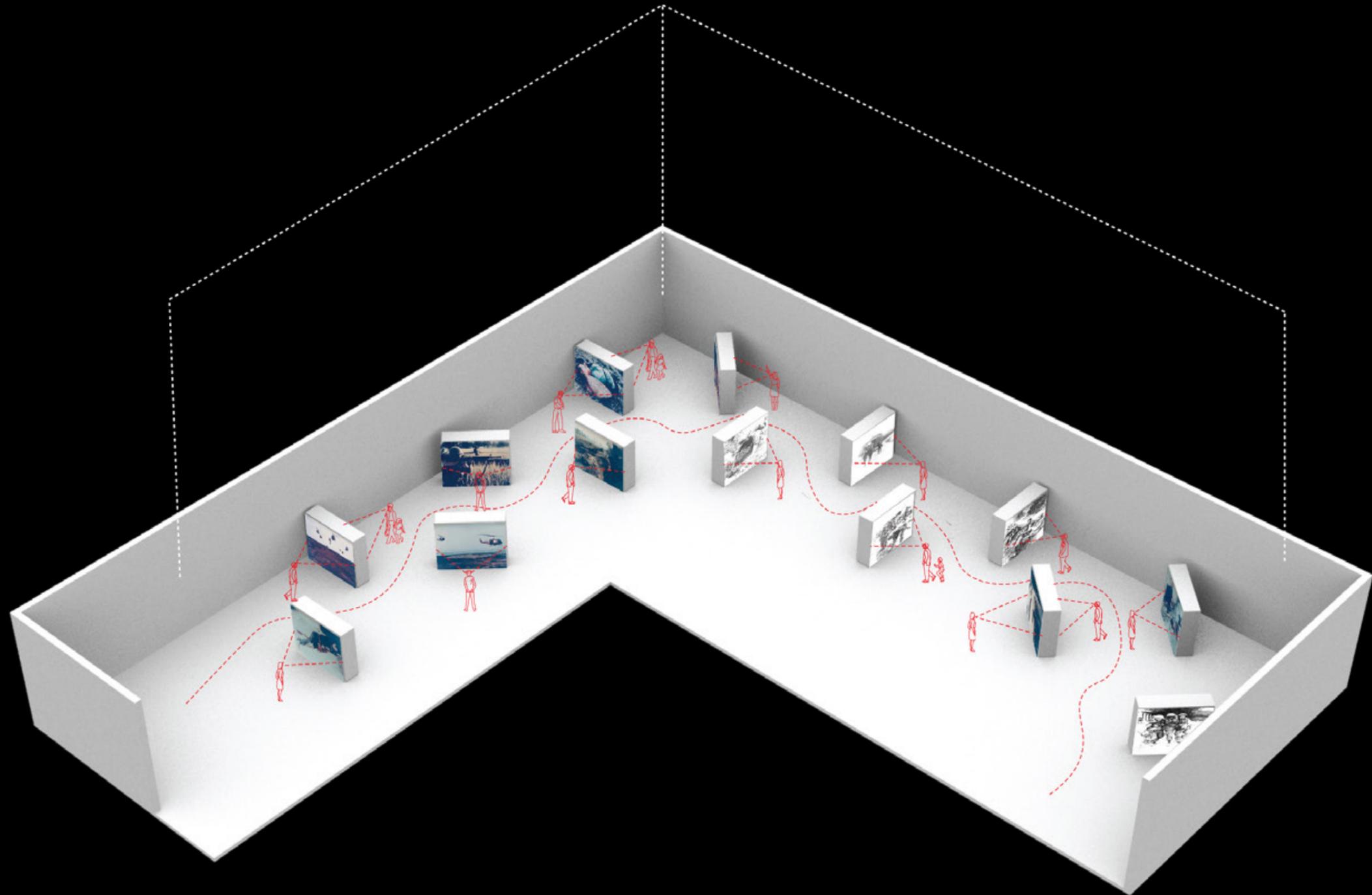


Scene 3 floor plan



Continuing with the journey, the visitor goes up to the second floor and encounters with the devices that carry both images in black and white and in color.

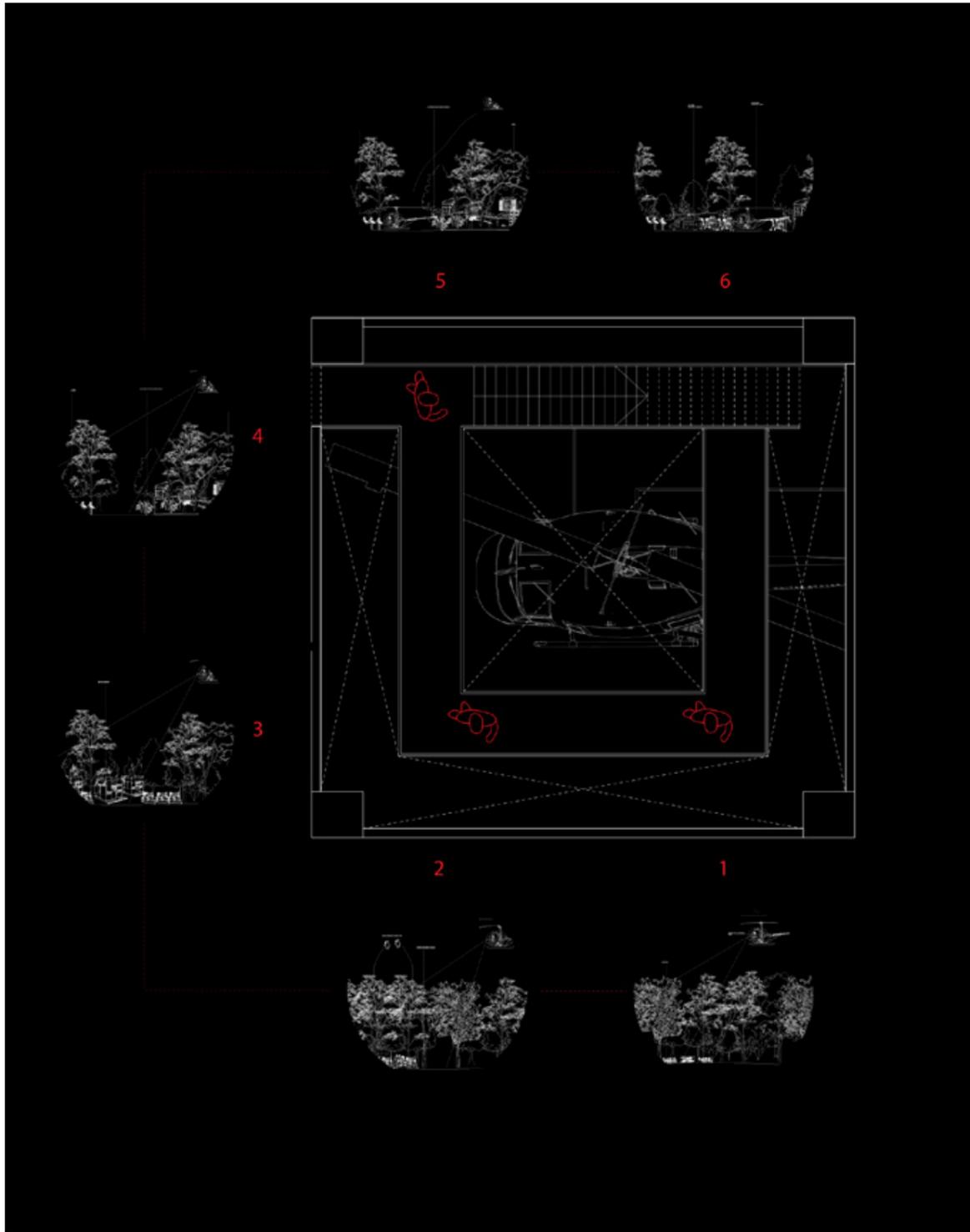
BLACK & WHITE + COLOR PICTURES



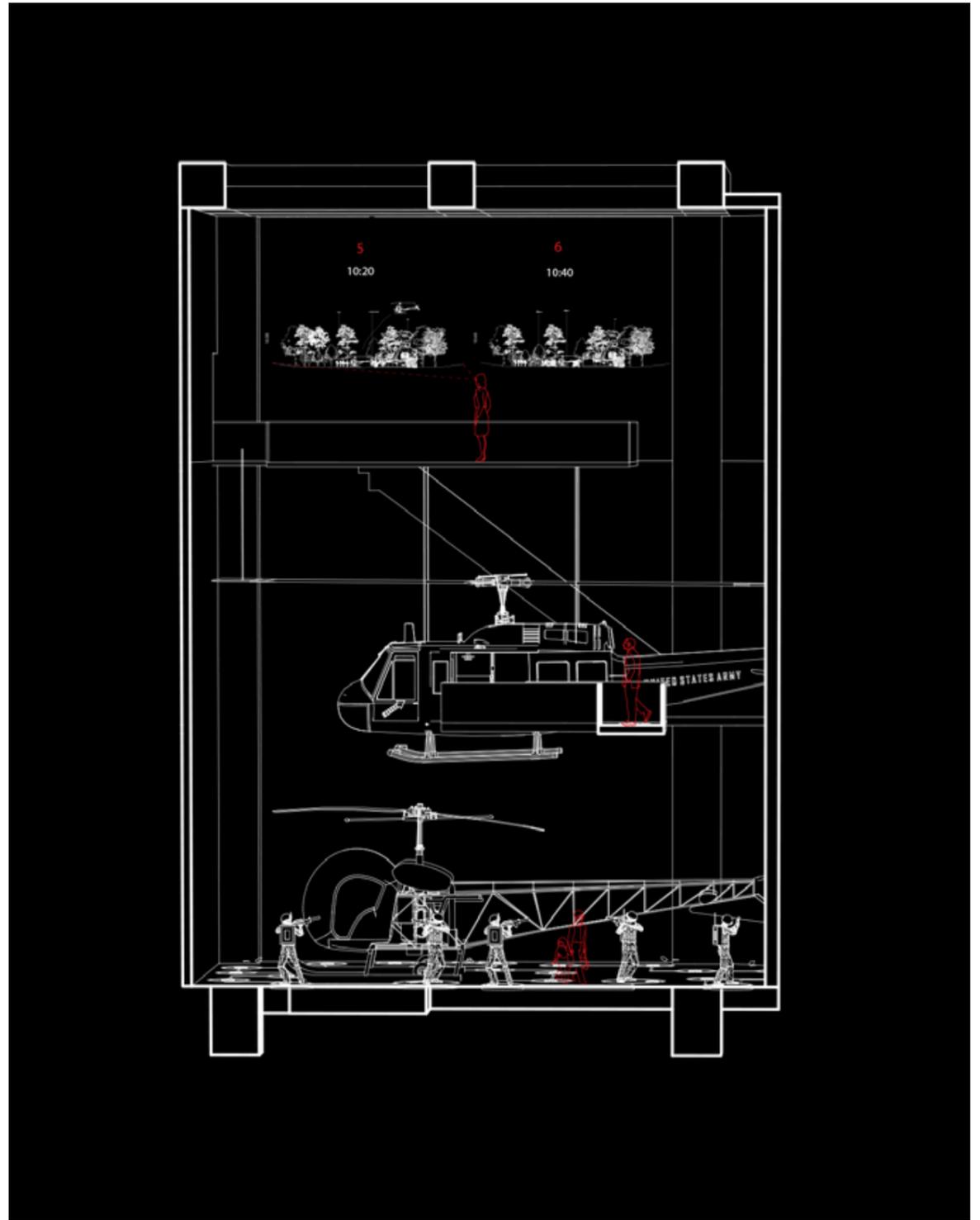
This space is designed to give the visitor the two pieces of evidence as they were presented during the Inquiry. The black and white, and color images. With the perceptual understanding carried from the previous spaces, the revelation of the evidence that the images imply can be articulated and understood by the user.



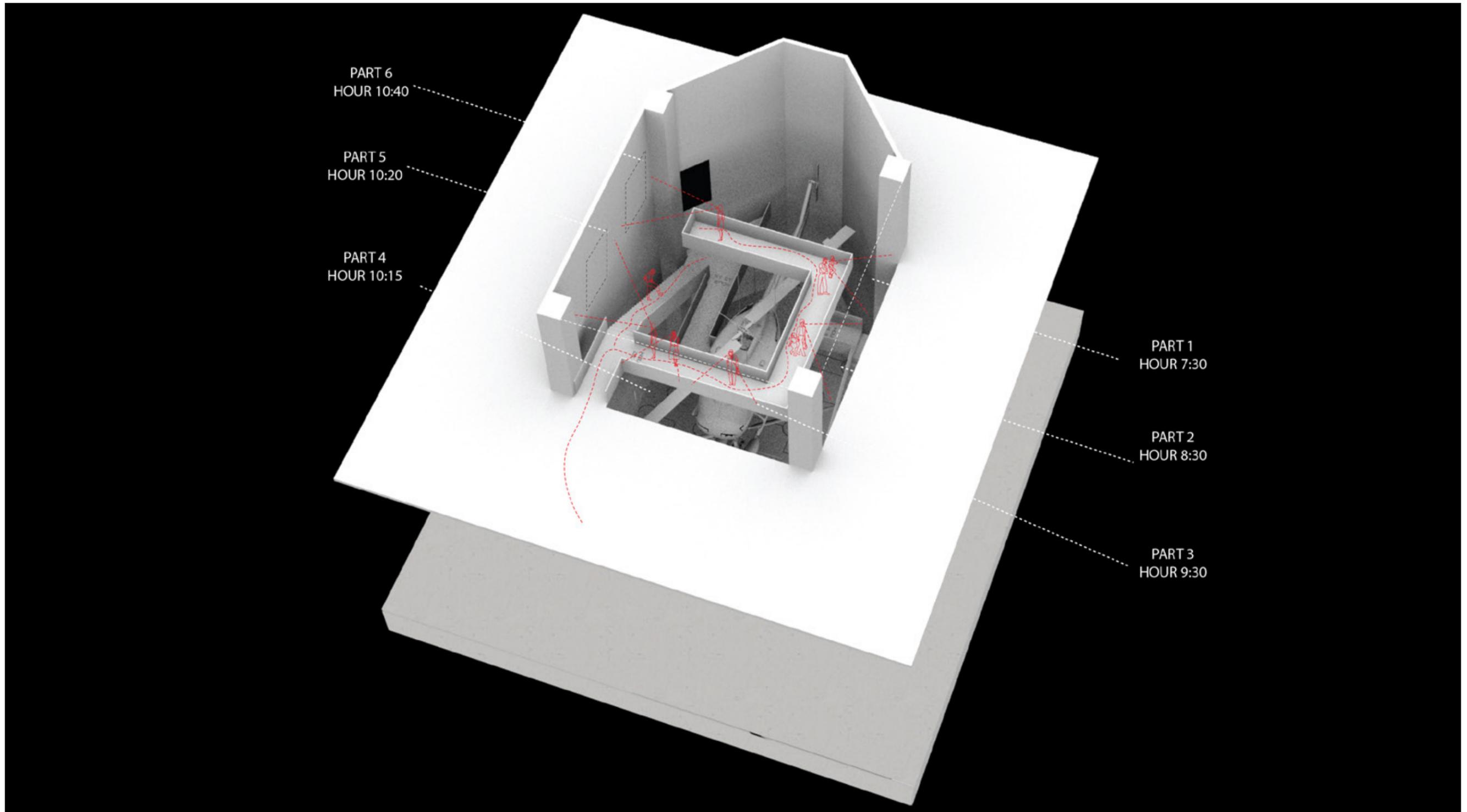
With the devices scattered through the room, the visitor continues to unpack the layers of evidence. Moreover, the user has the possibility of rotating the images within the device and can look at them from every possible angle



Scene 4 floor plan - second floor



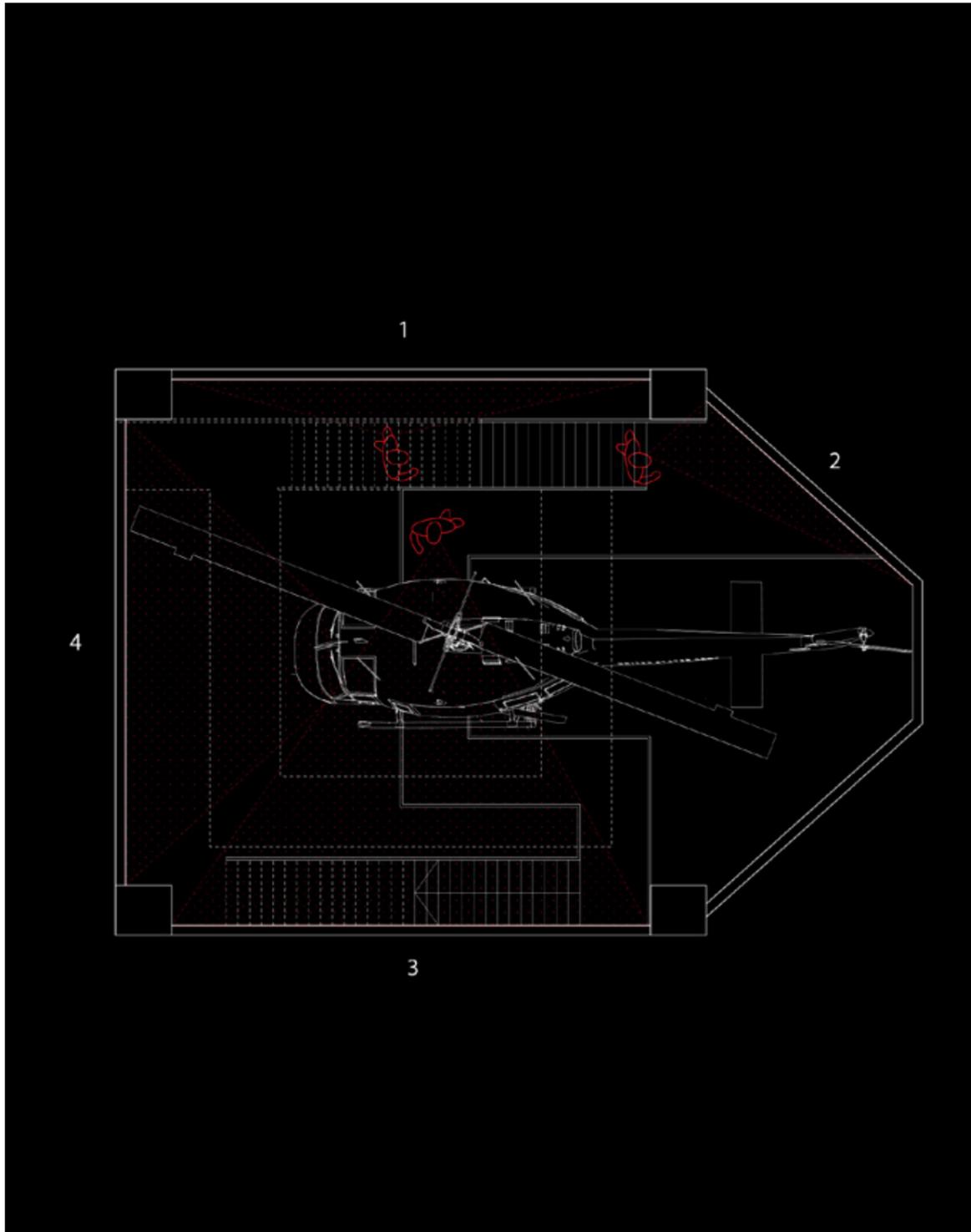
Now on the second floor, the user encounters the scene of the helicopter rescue. The existing void serves as the space of recreation due to its importance in the existing building and also allows the interconnection of the different floors. In there, the user is presented with detailed drawings of the rescue.



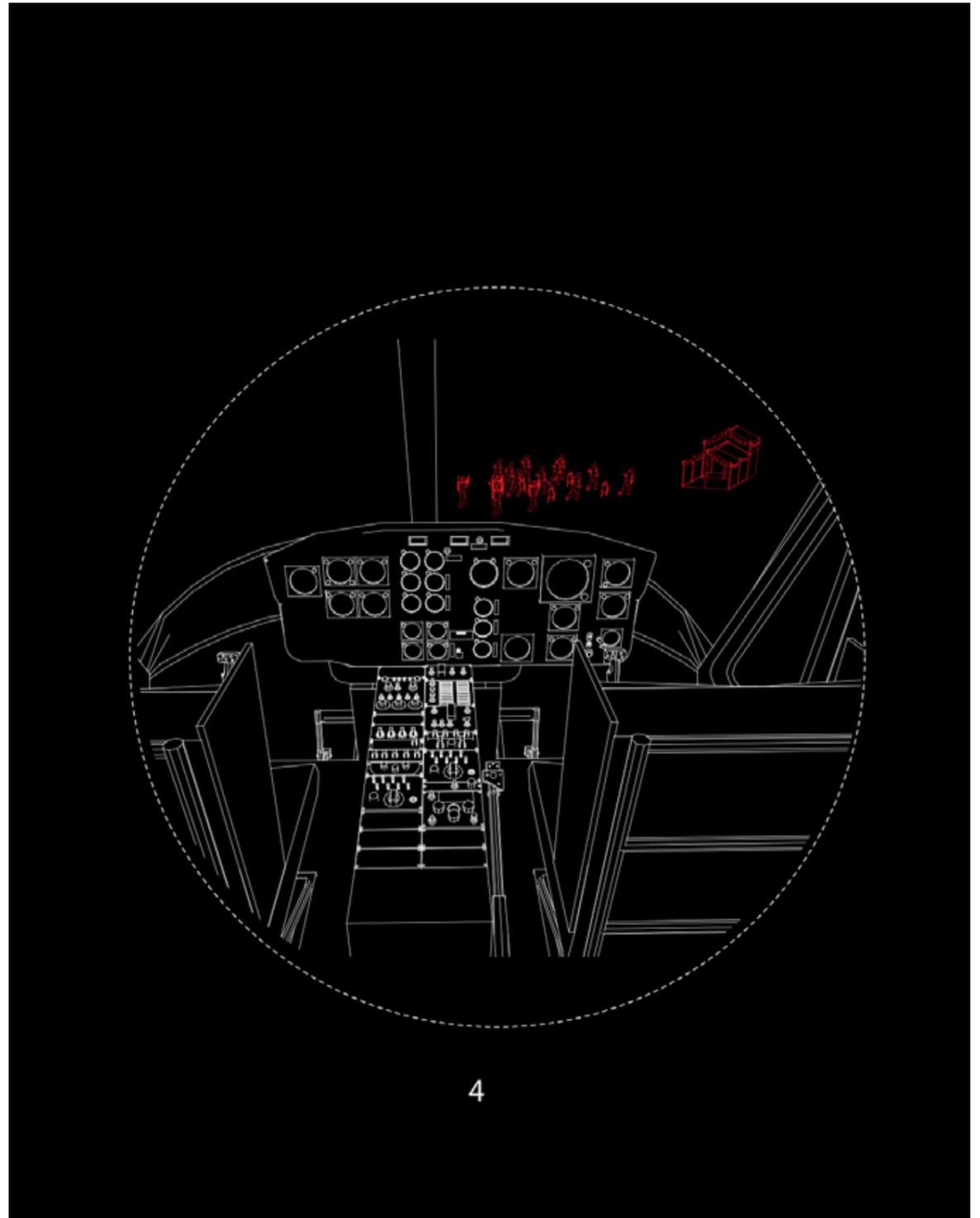
The space serves as a first approach of the scene that can be observed from above and understood as a whole. Each of the drawings are accompanied with the exact time in which they occurred during the mission.



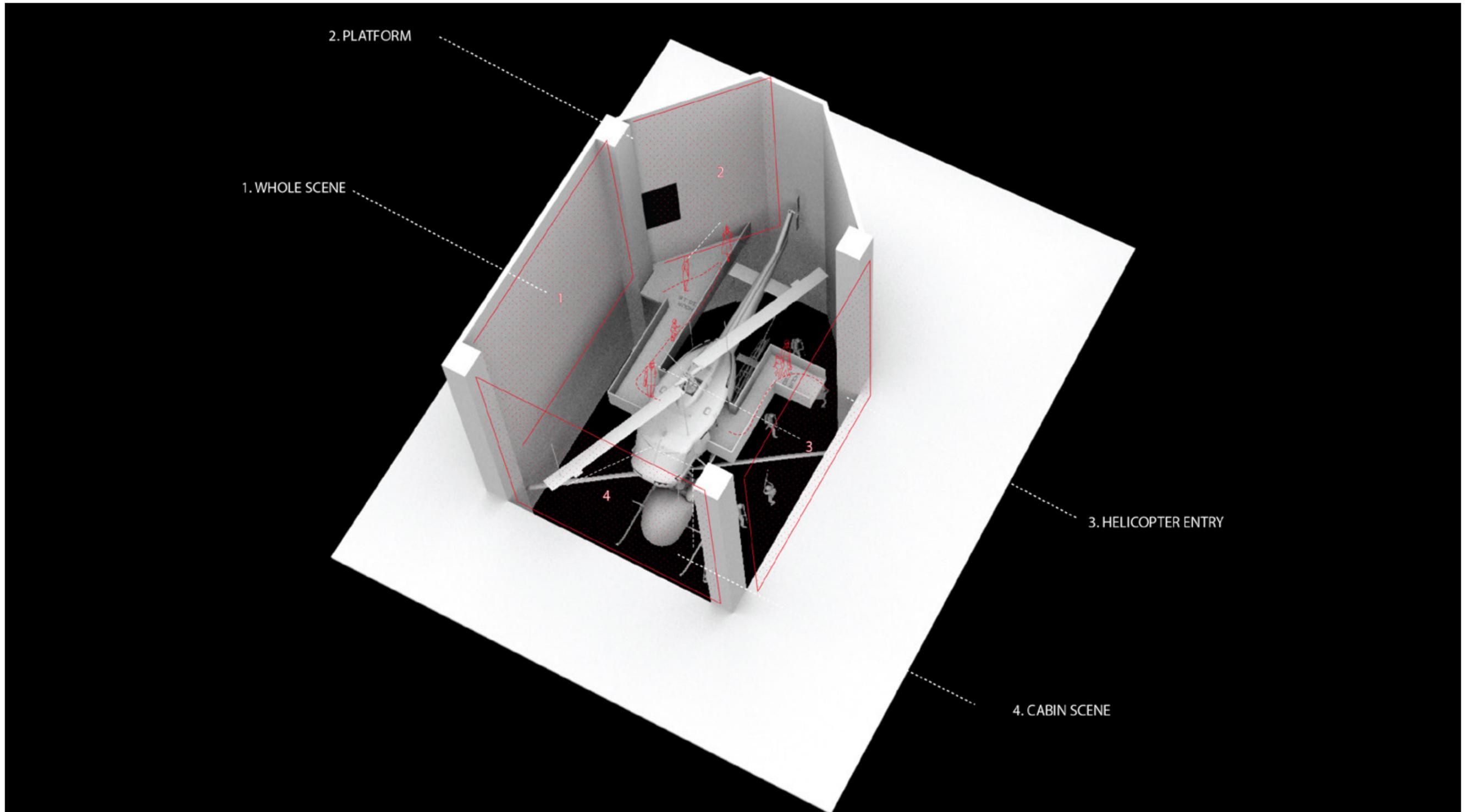
In there, the user can explore the scene from different angles thanks to the creation of a runway that covers the room and brings the person closer to the drawings.



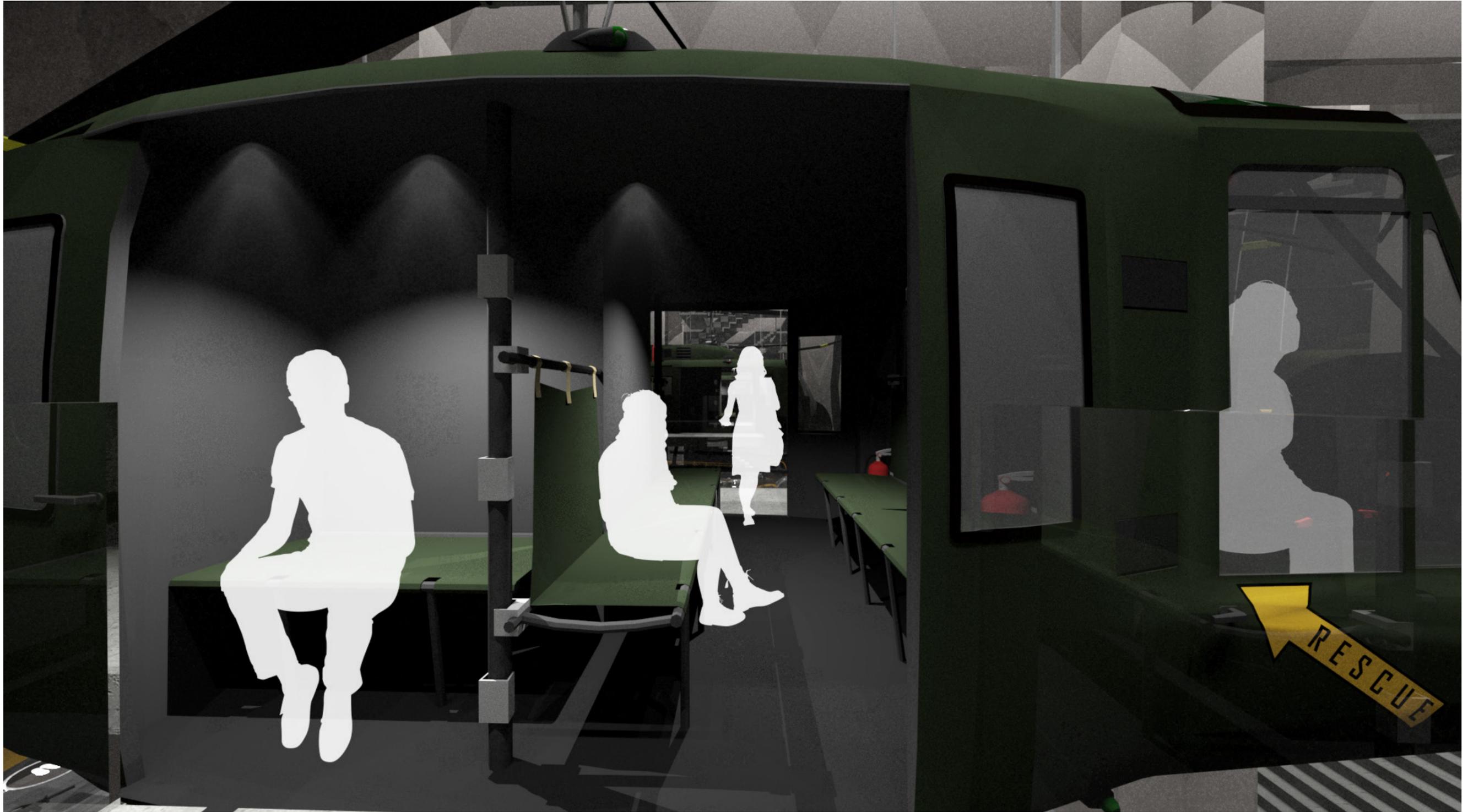
Scene 4 floor plan - first floor



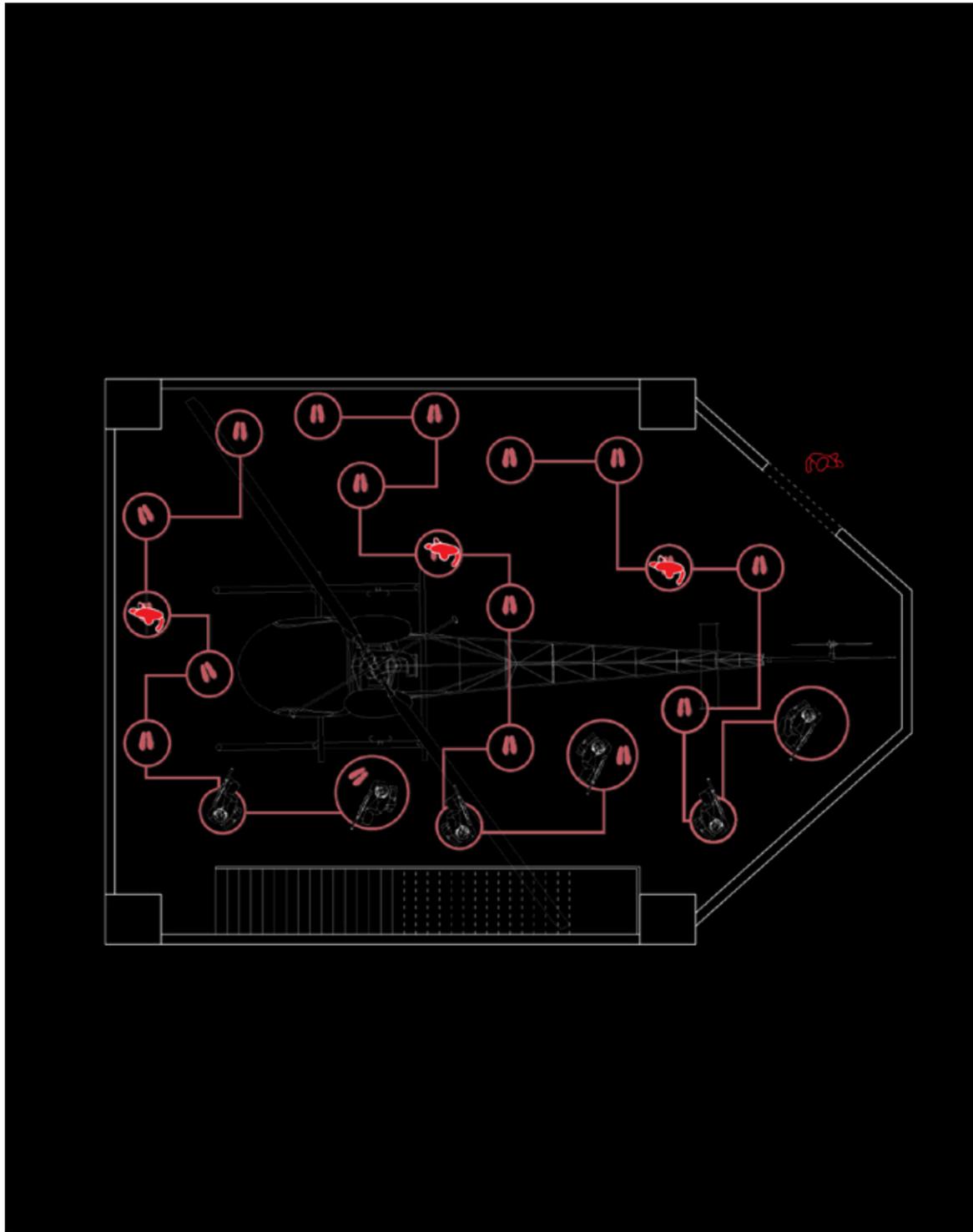
On the first floor, the person enters the sequence in which the UH-Huey helicopter was called to provide assistance for the rescue of the villagers. The room is covered with mirrors in 4 different walls that drive the eye's attention. The first one allows the person to catch a first glimpse of the scene as coming down the stairs. Similarly, the second wall gives a whole image when arriving to the platform. The third point of view allows the user to find himself reflected when entering the helicopter. Finally, view number 4 grants the visitor the chance to find himself on the pilot position and provides a perceptual understanding of the situation beneath.



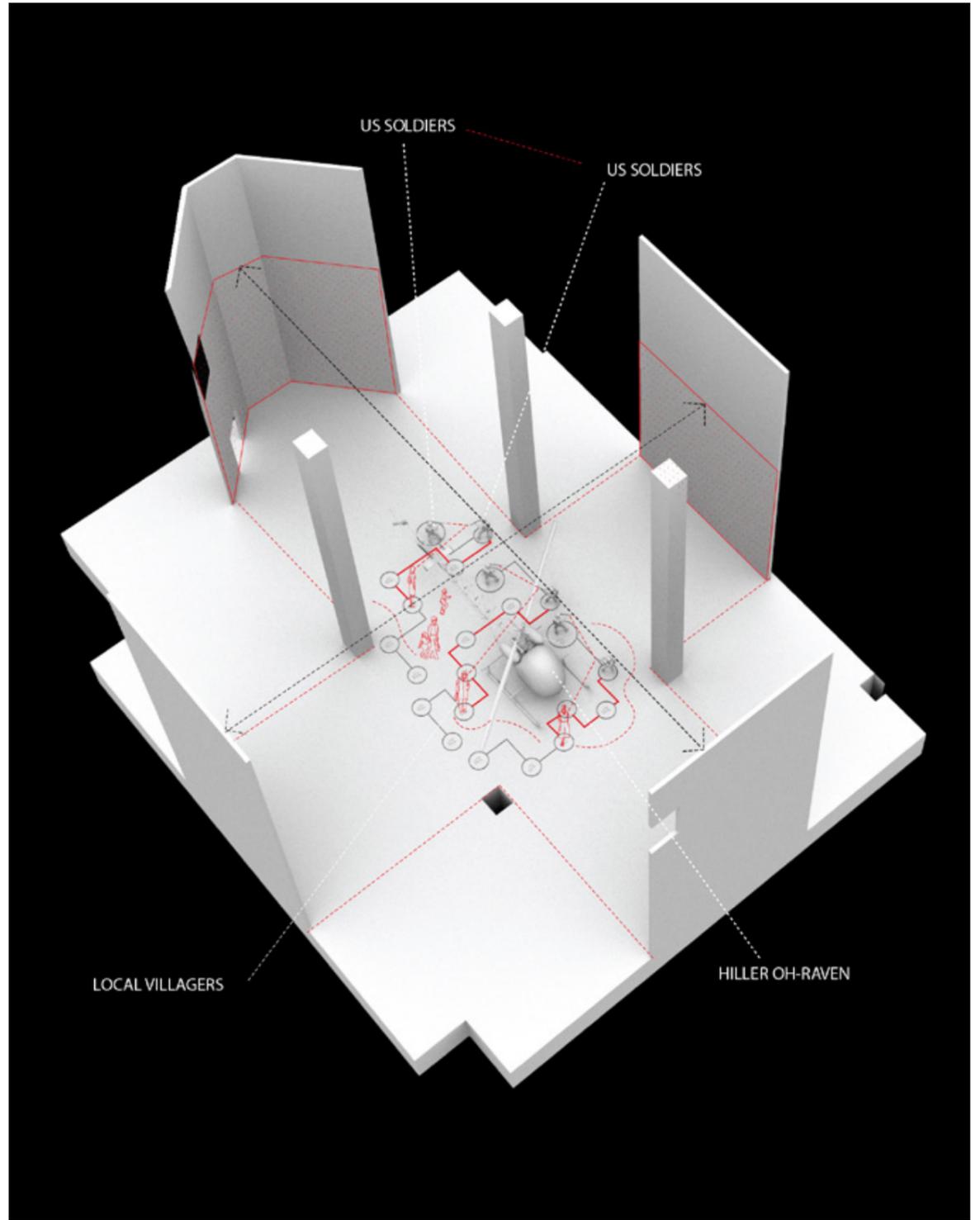
This diagram shows the complex scenery created to understand the whole episode with the help of the strategic mirrors located throughout the void.



This image illustrates the user's vision when entering the aircraft and later going into the cabin as the pilot.



Scene 4 floor plan - ground floor

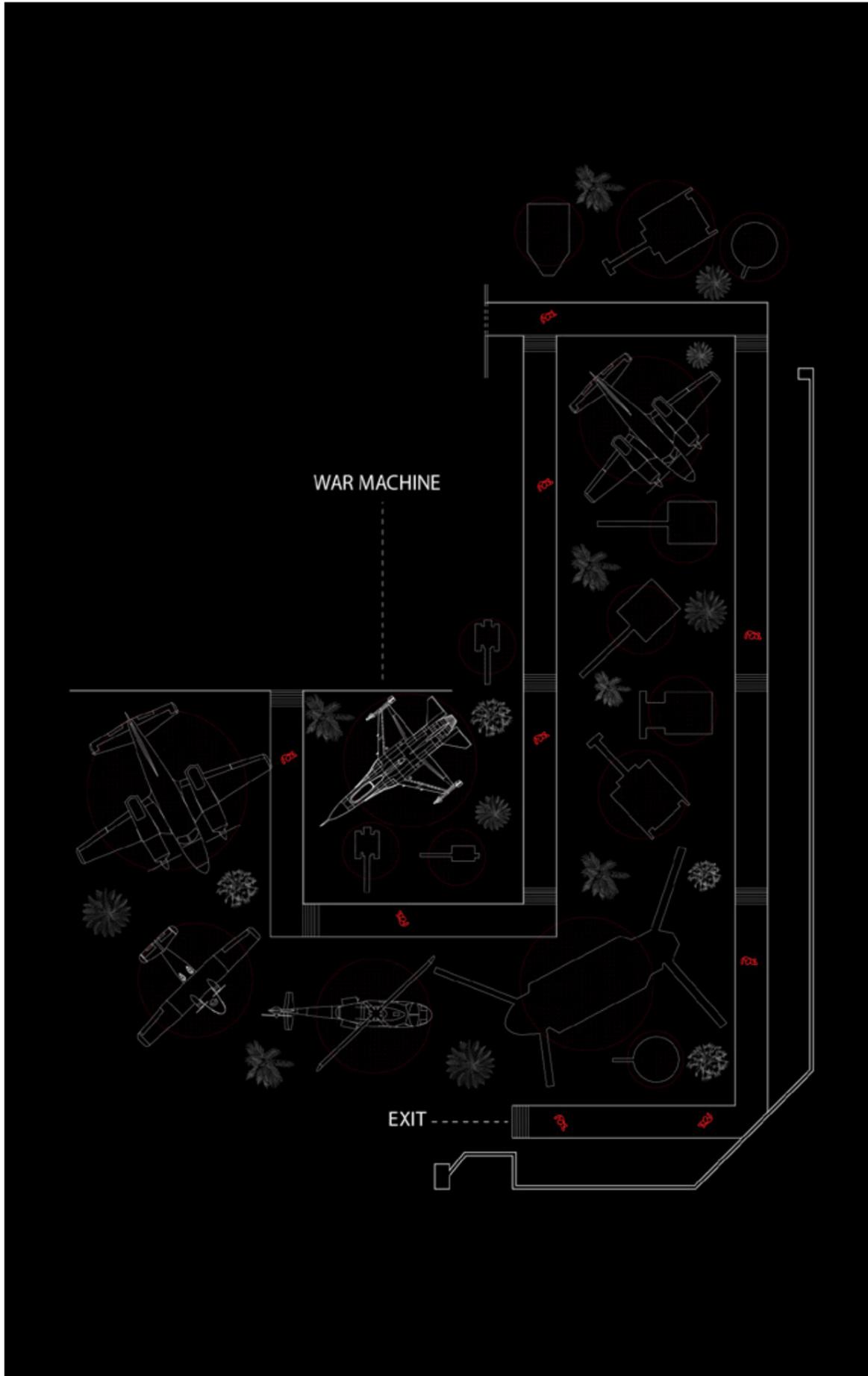


Scene 4.3

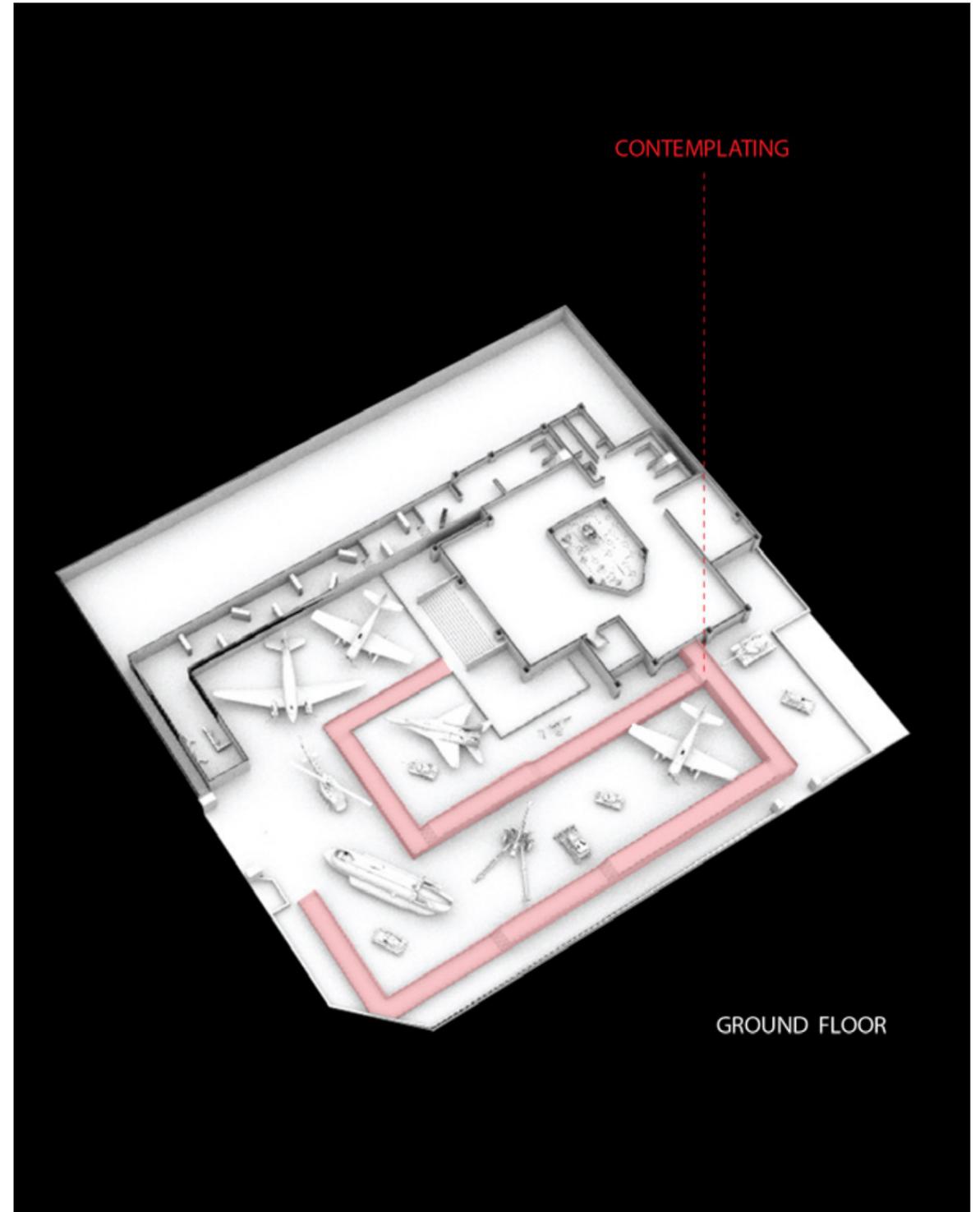
On the ground floor, the recreation of the rescue itself provides the user with the ability to participate and feel a personal involvement in the modeled evidence of the mission. The light installation on the floor showcases the space positions and the role of every actor of the episode. When the user situates himself as one of the escaping villagers, the path lights up in order to understand the fear of being held at gunpoint. The continuous use of mirrors highlights the importance of seeing the whole situation at the same time and puts the user in the rescued villager's shoes.



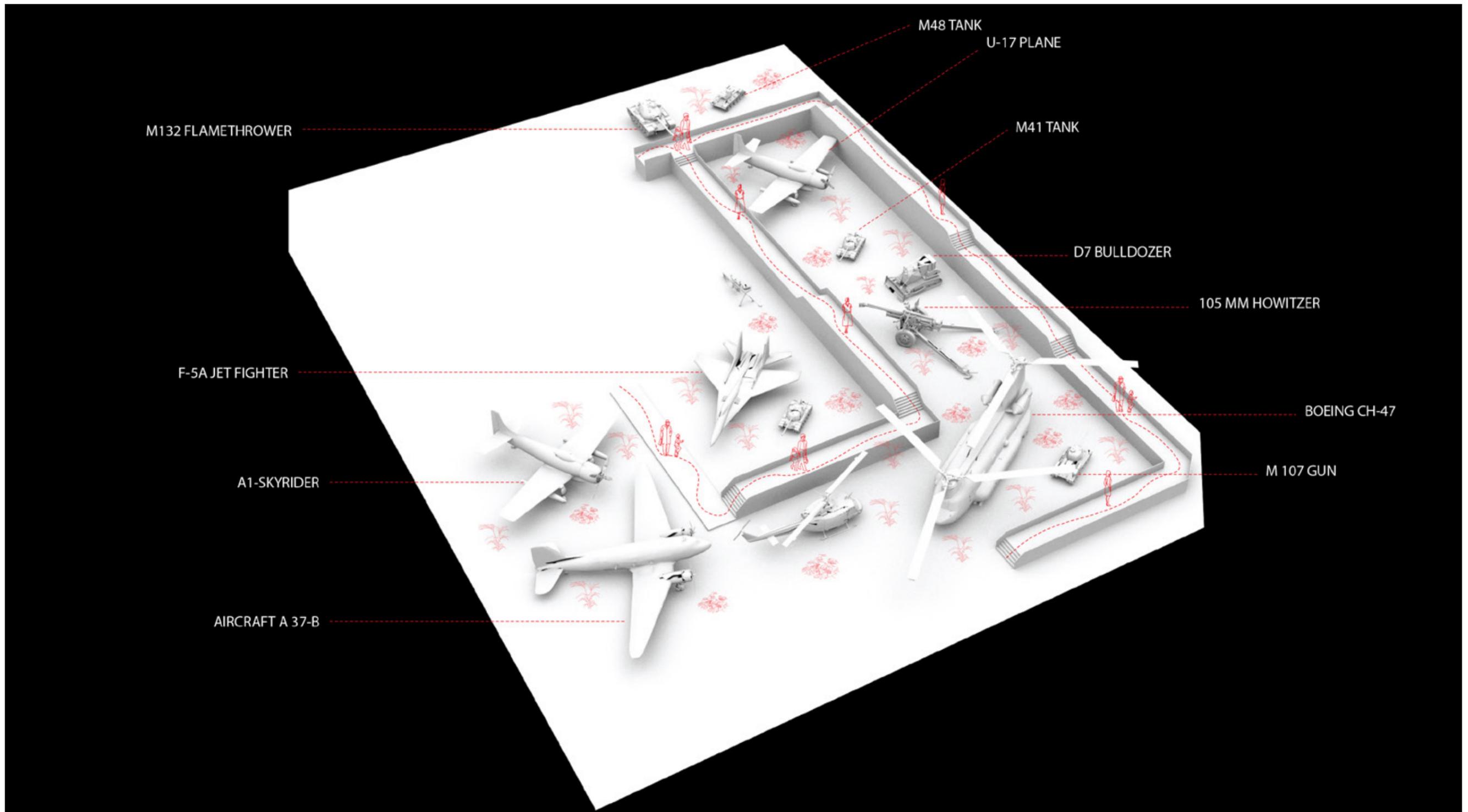
This render illustrates the vision of the room on the ground floor and the intervention scene of the helicopter. The space unfolds how the pilots intervened in an attempt to stop the killings. The importance of the helicopter showcased, goes in hand with the figures of U.S soldiers that ended up fighting each other in order to save women and children.



Scene 5 floor plan



The journey concludes with a contemplation of the war machinery that was used during the conflict, some of which played a key role in the crimes described.



After going through the different phases of the path and wandering the whole museum, the person finds his way to the outside walking across a platform that would go through the aircrafts and tanks already displayed in the museum. Some of the machinery shown goes from a D7 Bulldozer, used to clean forests and mine fields, to a Boeing CH-47 that served as a delivery of napalm bombs.



The creation of this platform aims to conclude the path, reactivate the exterior of the museum and provide the existing building with a new natural environment that allows the better display of the war machinery.

PHOTOGRAPHY



MICHAEL VAHRENWALD

Building and shadows

FALL '19



Bird just on time

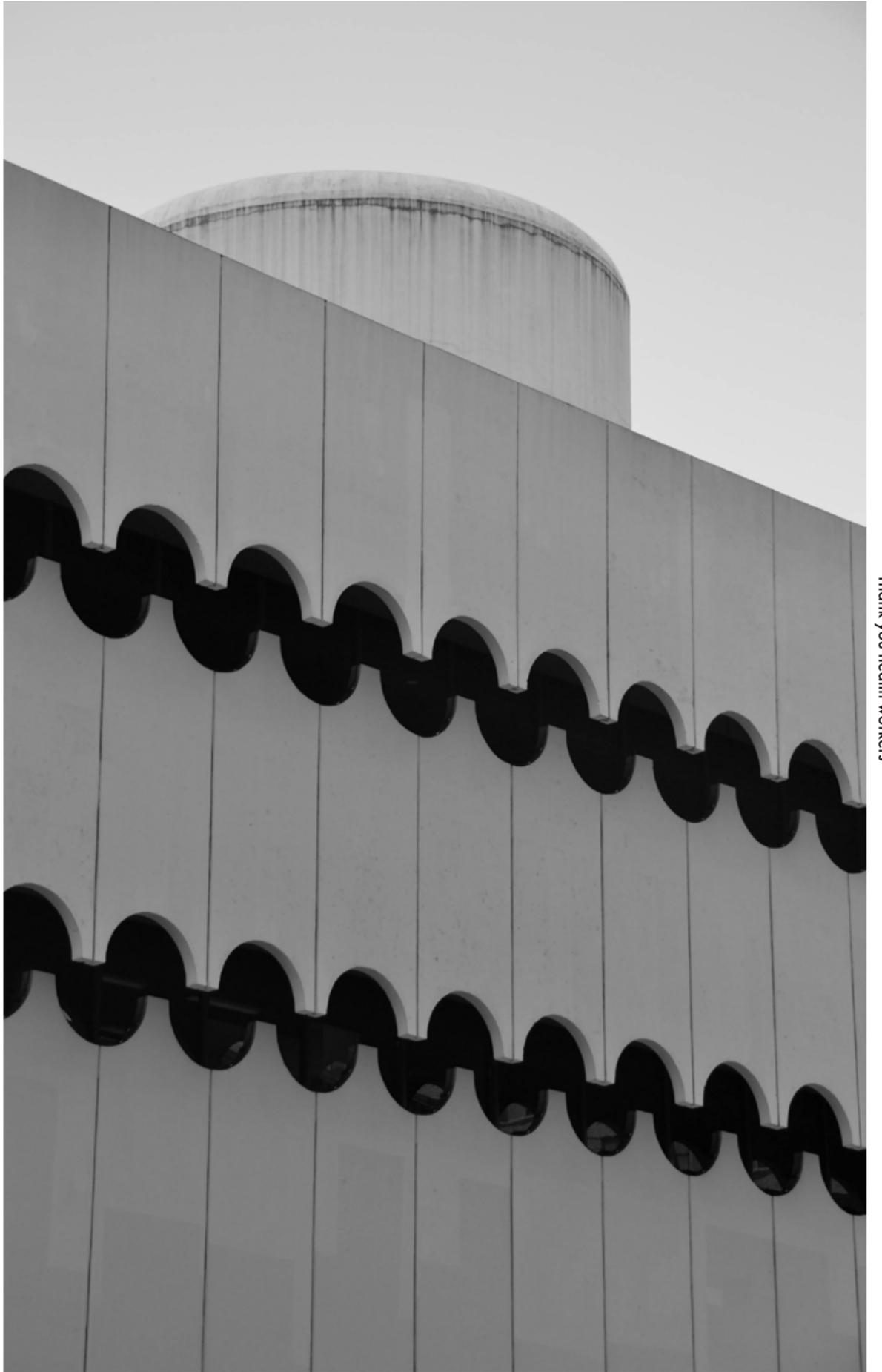


The Oculus & the old

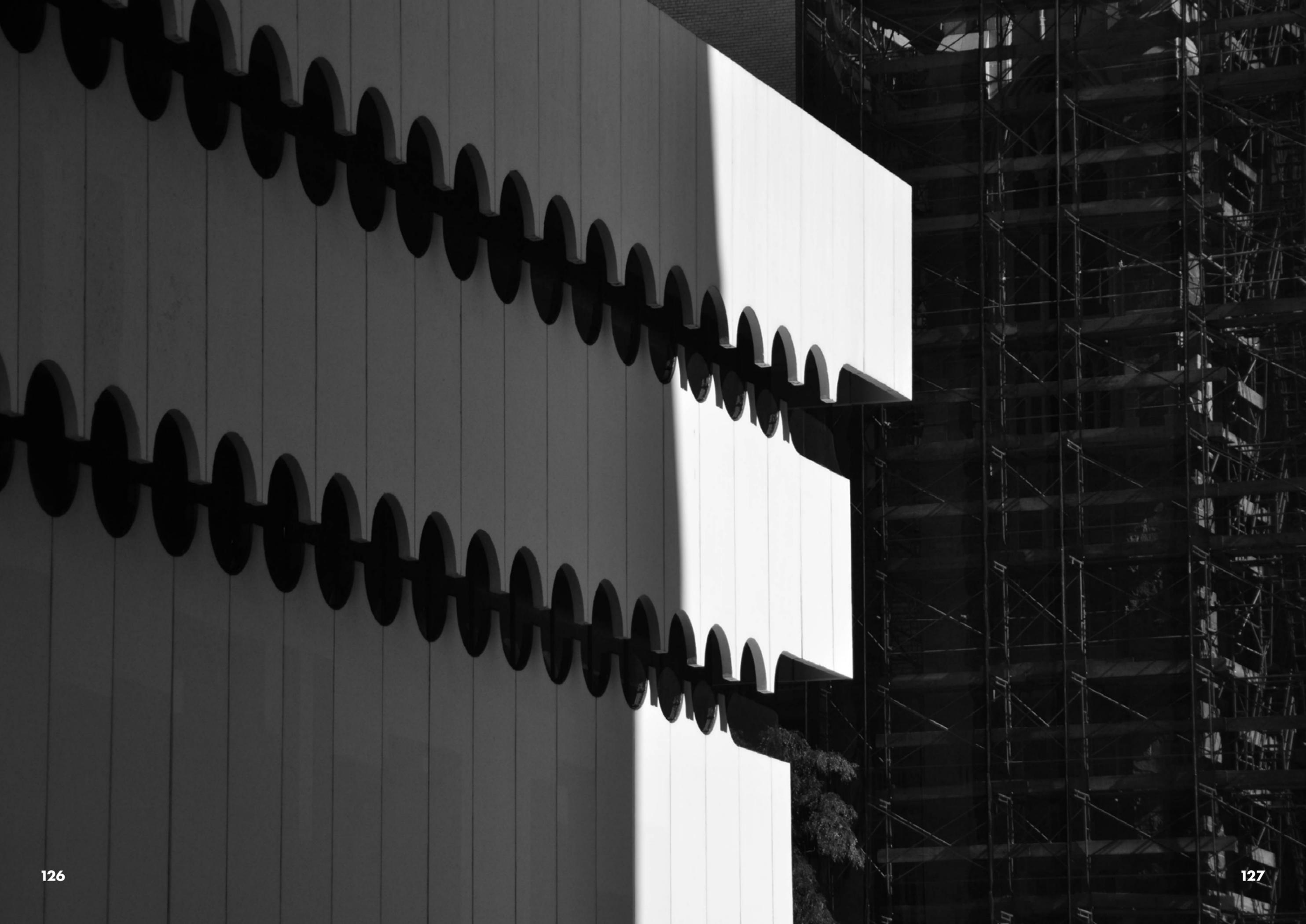




Lenox Health Greenwich Village



Thank you health workers





Smokey city



Patterned facade



Columbia's campus

