THE MIDNIGHT FURNACE

Community socialization space design for night workers who have lost their daily lives

01/ THE BRIEF

[01] The new space I propose is a lighthouse that lights up the dark Camden night. The semi-transparent glass block, which is elaborately inserted into the existing building, exposes internal activities to the outside and attempts to fuse with the outside public.

[02] The composition of this building, which seems to be made of several layers, can be seen as a total of three large masses. It is divided into the main mass for repairing cars, an accessory mass located behind them, and a car wash mass aattached to the left side of the building.

The site is located in a fairly open area, so it has the advantage of being accessible from all directions. An impressive facade is located in front of the building, and paint marks and iron structures are tangled with traces of time.

[03] My design portfolio tries to explore what I can do as a designer within the big theme of Waste Age. The sense of crisis regarding sustainable design and eco-friendly design has been a problem that has been going on for decades. It also points out the problems with the existing architecture and the process of destruction, and talks about which method is more sustainable.

All existing spaces constantly change, adapting to a given environment and changing situations in any way. The method of change appears as an internal change and an external change, which can be divided into passive and active changes. Spaces that cannot adapt to change are discarded.

[04] All history repeats and cycles. There is no doubt that this world we enjoy will soon become a legacy of the old times. We are building a new history on top of old cultural heritages and are constantly trying to communicate. But in that series of processes, was our attitude toward the past appropriate? Did we not only pursue rapid growth? The appearance of the past may have changed a lot due to the passage of time, but it still embraces us and forms the basis of our history.

Final Design Proposal - Exterior Perspective View / Designed by Seongmin Kim **[01]**

Existing Building / Photograph by Seongmin Kim **[02]**

The Waste Archive / Made by Seongmin Kim **[03]**

The Waste Model / Made by Seongmin Kim **[04]**

02/ THE SITE / DESIGN STRATEGY

[05] When I first visited Hand Car Wash, I felt that the facade of the building felt intense. The building was not built according to plan, but it felt like it was added to the given land over time. I was able to check three large masses on this site, one of which was the main building mass, another mass connected to the back of the main building, and another mass was for car washing part. Not only buildings but also decorative elements were attached. Two pillars located on either side of the facade are attached to an old concrete wall. There is also a brick wall painted with white paint behind it.

* Laser Cutting on MDF Board / Acrylic boards / Plywoods

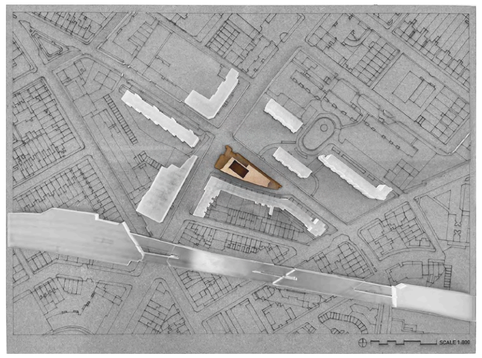
[06] Most buildings are used for daytime use and remain empty at night. There is a stark contrast between places for daytime workers and those at night. I would like to propose an adaptive reuse plan corresponding to the era of waste by expanding the usage time and users of the building and adding new programs that are strongly linked to the purpose of using the existing building.

My design strategy is to maintain the identity of the existing building by maintaining the spaces with symbolic or essential programs of the existing building, and to strengthen the purpose of using the space by introducing a new program strongly related to the existing program.

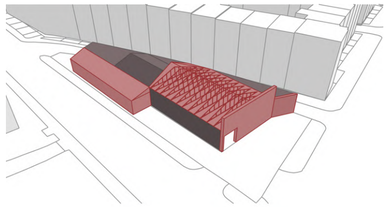
[07] Early site models were made of maf boards and cardboards using laser cutting machines. Early site models were made of maf boards and cardboards using laser cutting machines. Each element with the same material and color texture has strong unity and represents an existing building.

[08] After selecting the characteristic elements that are left behind, I made them into physical models. The overall structure was made by laser-cutting the 3mm mdf board, while the rest of the elements were delicately made with cardboards while maintaining uniformity. The remaining parts (the parts where the new function will be added) were made by bending and joining the frame with 1 mm copper wire.

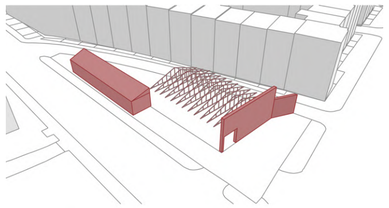
* 3mm MDF Board / Cardboards / Copper Wire



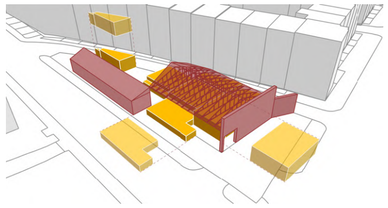
[05]



THE SITE

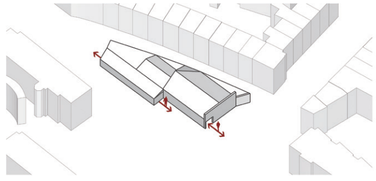


SELECTIVE MAINTENANCE

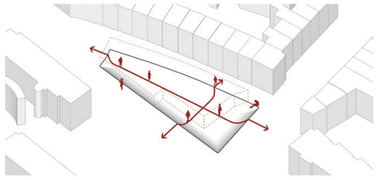


ADDING VOLUMES

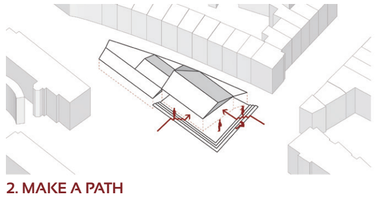
[06]



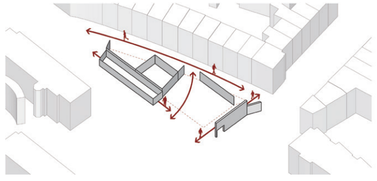
1. EXISTING DIRECTION
Existing accessibility is determined in one direction.



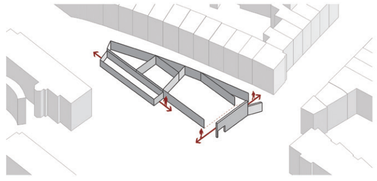
4. LOWER CONNECTION
Lower the ground level to induce people's access.



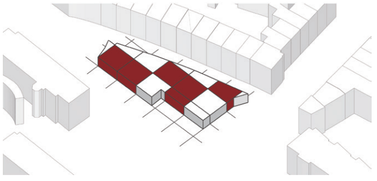
2. MAKE A PATH
Move the existing facade to create a new passage.



5. REMOVE THE BOUNDARY
Remove the boundary and make space open.

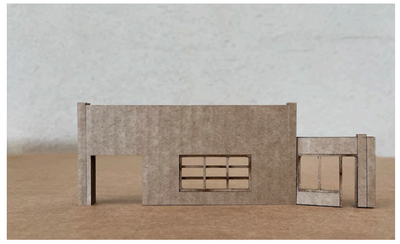


3. ADDITIONAL PATH
Inducing approaches from various directions.

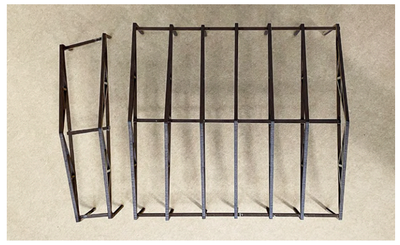


6. MASS STUDY
Selective maintenance and removal.

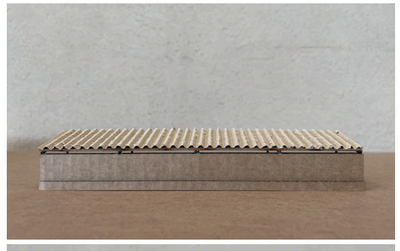
FACADE



CEILING STRUCTURE



CAR WASH SPACE



PERSPECTIVE VIEW

[07]

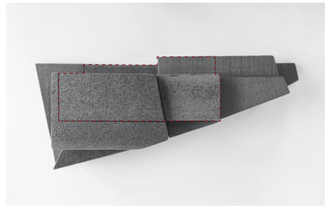
TOP VIEW

[08]

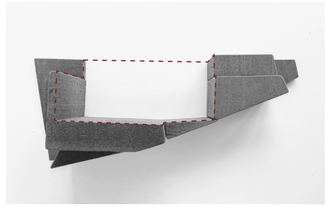
03/ DESIGN DEVELOPMENT

[09] In this study model, I simplified and emphasized the volume of the existing building and identified which part plays which role. In addition, the height size position of each volume was objectified. Then, a partial cut was made for the insertion of a new program. This part corresponds to 80% of the main volume and 50% of the car wash. The subsequent insertion of the bright mass fragmentarily shows the entry of a new program. This area plays the most important role as a space where the functions of the entire building are interlocked.

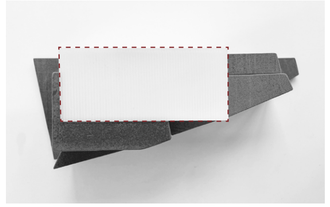
* Black Plastic Forms / Polycarbonate panel



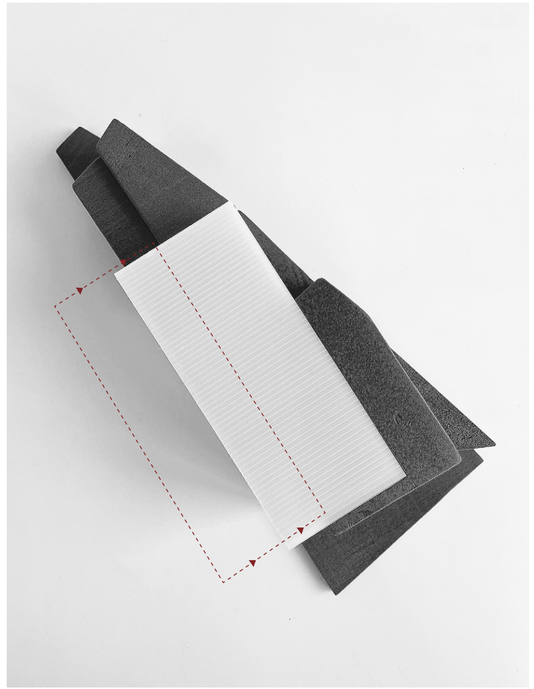
EXISTING MASSES



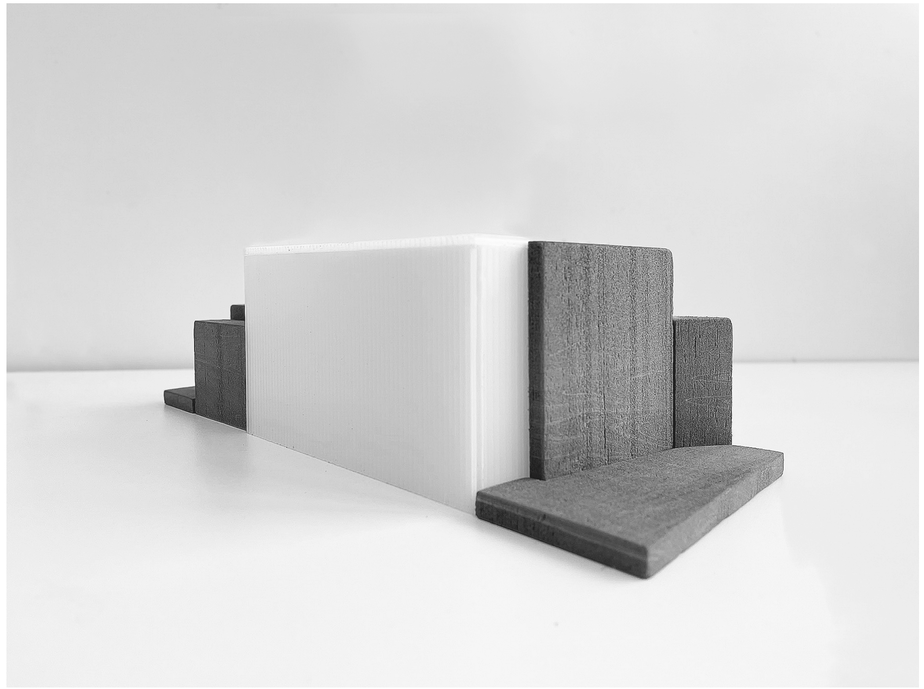
SELECTIVE DELETION.



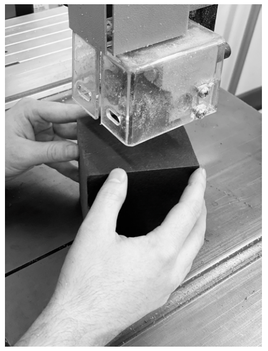
INSERTING A NEW MASS



INSERTING A NEW MASS



FORMING A NEW IDENTITY

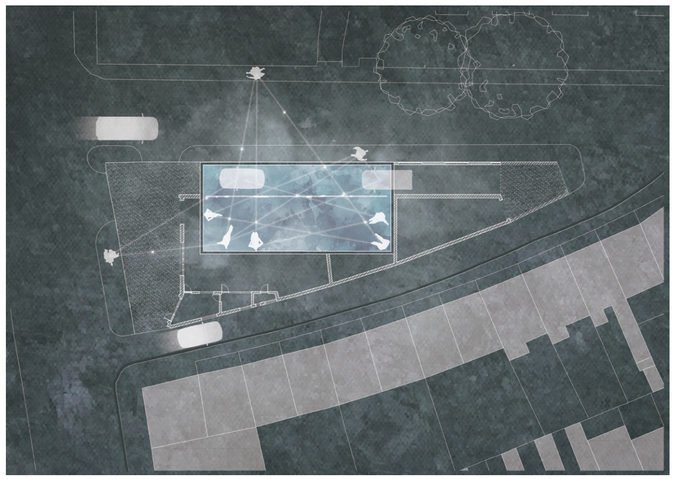


[09] MAKING PROCESS

[10] The space I suggest is a space where people's eyes cross. People who use bathhouses recognize the existence of others and remind them of their location. Each other's gaze acts as an unspoken way to confirm the existence of others. The gaze extends not only from the inside but also from the outside, emphasizing the location of the site and transmitting a signal that it is not left alone at dark night.

[11] The new entrance extended from the ceiling structure of the existing building serves as a structure that reveals the identity of the building externally and serves as a huge window that reveals the activities inside.

This shape follows the existing frontal shape and serves to expose internal activities and light to the outside. The entrance is used as a passageway for customers and vehicles who use the car wash. This boxed volume, as if inserted into an existing structure, replaces the existing opaque brick wall and forms a new, translucent layer.



CROSSED GAZE **[10]**

[11]

04/ DESIGN DEVELOPMENT

[12] This axometric diagram illustrates the overall structure of the space I propose. New blocks are added into the main bath space and a new passageway that wraps around the existing building frees users to move. The sauna space located in the back of the building is a space of convergence where residents and Bath users meet. The existing car wash tunnel is maintained and extended in contact with the new access road.

[13] Most night workers work alone in a dark night environment. The field of view given to them is only a few meters away and is always surrounded by thick darkness.

The range of vision they perceive is very limited and is mostly concentrated toward the lower part. Communication with others is very limited, and there is no separate space for relaxation.

I'm going to create an intermediate area between the workplaces of night workers and their homes.

I provide them with opportunities for socialization and create a place for communication. Expand the limited occupancy space of users and form intersections between users.

[14] These three access points welcome entry from the outside and serve to represent the new identity of the building in different ways.

[15] North Elevation View

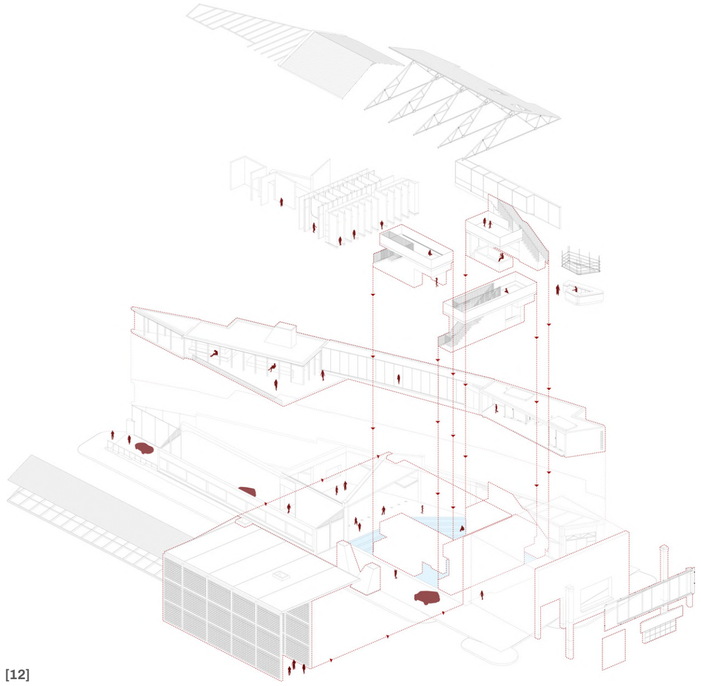
[16] Section Detail Drowing

[17] The image that I want to show through idea sketches is the intersection of gaze in various ways. I tried and experimented with various methods such as making mezzanine layers, using transparent materials, and breaking boundaries.

[18] What I wanted to show the most while drawing this pen drawing is the movement of users and the circulation of water. I delicately drew the characteristic elements (ceiling structure, chimney, Bath) and the rest (vehicle movement, smoke).

This space is surrounded by warm warmth, and people float freely in it, meet each other, and mix. Hot smoke rises from the chimney, and the light illuminates the inside and outside.

Additional modifications were completed with computer work. Water expressions and smoke saturation lights were controlled.



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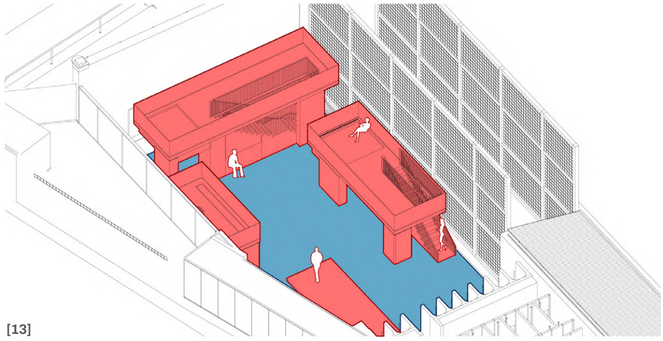

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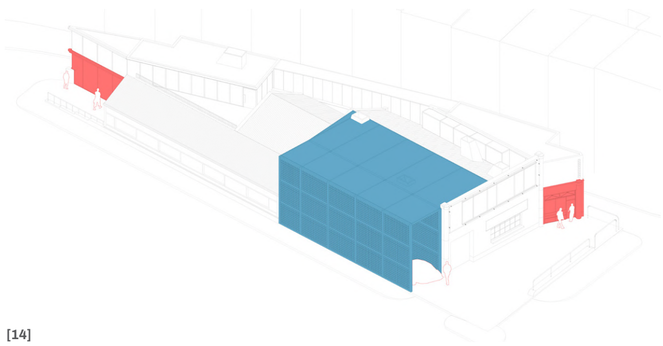

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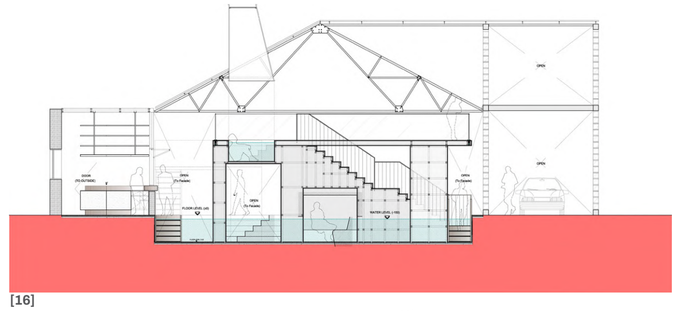

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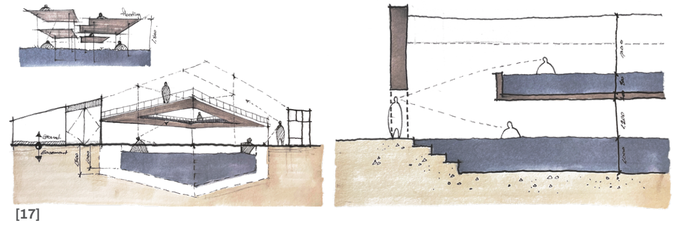


[17]

[18]

05/ FINAL MODEL MAKING

[19] I used a plaster to make an impressive facade. First, the mould was made with laser cutting and the plaster was poured. After a day, I elaborately separated the mould from the plaster and completed the model.

[20] I used a 3D printer to make sophisticated and rigid models. Bathroom units arranged independently were printed using resin materials. Small gaps or curves were delicately expressed in the results.

Although the 3d model using filaments is less sophisticated than the resin model, it helped predict the results of the overall model.

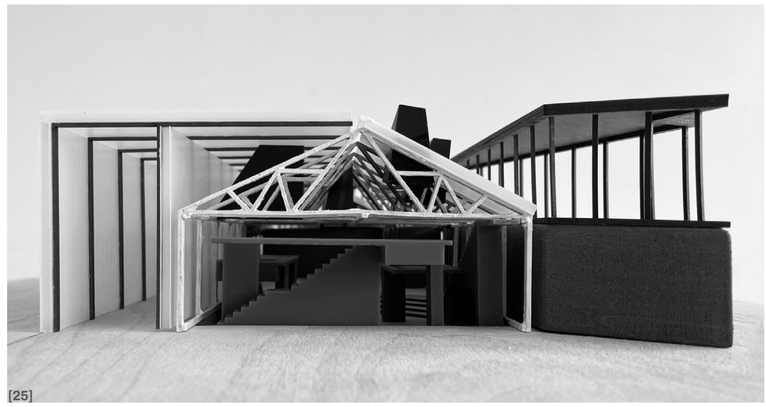
[21] The completed resin model represents independent Baths. Small gaps and stairs were expressed in accurate sizes and precise curves or straight lines that were difficult to express with hands were clearly expressed.

[22]

[23]

[19]

[24]



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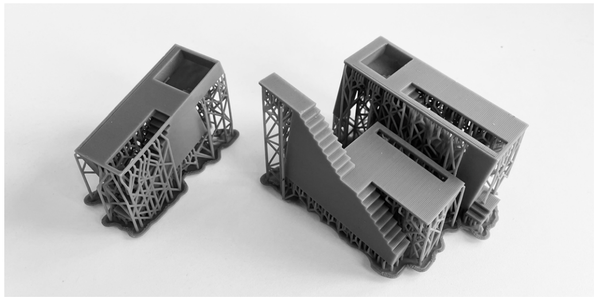

[21]

[26]

[22] The completed Plaster Facade model has a rough and heavy atmosphere that is different from the overall feeling of the entire model. The model visually shows the symbolic Facade of the existing building and gives the model an identity.

[23] Behind the plaster facade, a resin model made of 3D printers appears. The elaborately arranged model allows us to imagine the expected appearance of the building that will actually be built.

[24] Top View - With the Cover

[25] Section

In the section of the model, you can see the volumes and the bath space inside. Volumes with each role occupy their own area under the ceiling structure of the existing truss structure.

[26] The finished model consisted of various materials. Wood, mdf, cardboard, 3d printer (resin), polycarbonate, plastic foam, etc. Various materials were elaborately cut and combined into barrels in various ways. The model represents a replica of the space I propose and shows a unique combination of materials that only the model has.