RE-IMAGINING OF THE TELUS BUS SHELTER

UNIVERSITY OF ALBERTA

Dec 8 2023

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INTRODUCTION

For this project, we were put in groups and tasked to focus on the issues that are instilled within Downtown Edmonton's Telus Bus Shelter on 100 street. The matters we are facing at hand involve social issues regarding homelessness, public drug consumption, and anti-social behaviours, all of which are affecting the overall safety of the public users of the Telus Bus Shelter.

To deter from these certain behaviors, ETS has initially removed the unit heaters within the space. This is a general starting point of what the outline of our project is, which is to propose a design solution that maximizes comfort for all people while simultaneously addressing safety and security concerns.

As it was advised in the project outline, it was highly recommended that our first step was to dive into research- particularly the general concepts of public realm and hostile architecture. The term "public realm" emerged in the 20th century by urbanists, it is a broad and encompassing term used in urban design to describe spaces within which people gather, or simply put, they are public spaces that belong to and are accessible by everyone. In our findings, we found that public realms can facilitate positive human interactions, they can generate a sense of community and a sense of place. Moreover, the quality of a public realm affects the livability, attractiveness, and safety of a city or community.

The term "hostile architecture" is a design strategy that utilizes a built environment - including pathways, arenas, public spaces. These built environments have a job to successfully lead people and train them to function a certain way. These design strategies are tasked to guide, control, or even restrict how we interact with urban spaces. Since hostile architecture is implemented to somewhat control the behavior of users, the use and practice of it can be seen as politically polarizing. There is a side of using this strategy to maintain order and cleanliness in public spaces, while the other side would argue that it is an exclusionary practice that targets vulnerable user groups.

While keeping these initial research findings in mind, we also looked for additional resources to help us pinpoint important strategies to consider. We also looked into a useful approach called CPTED, which served as a great starting point to help guide us in defining our design direction. Crime prevention through environmental design suggests that the proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, and the improvement in the quality of life. CPTED lists 5 strategies to navigate through these problems. Natural surveillance, natural access control, territoriality, activity support and maintenance. In particular, we took interest in their strategy of natural surveillance, since it felt like we could apply it to the project. When applying the strategy of natural surveillance in transit stop settings, they advise to maximize visibility by designing doors and windows to look into public areas, traffic flow, and use adequate lighting. Taking note of this application, and research of the previous terms, all served as a good first step into our ideations and how we can ensure a comfortable setting for users of the bus shelter.

Image taken by Kristen

ANALYSIS

While keeping in mind what we've researched so far, our next step was to visit the bus stop to gather information and observe how the space works presently. After visiting together and taking pictures, we asked the question, what makes the bus shelter physically uncomfortable? When visiting, these are our main takeaways. Aside from the city removing the heaters, there are also other aspects that make it uncomfortable. Our first main takeaway was the emptiness of the space. There was a lack of identity that made the space feel uncomfortable. There was also a noticeable amount of garbage littered throughout the entirety of the site. We also took interest in the corner of the shelter. The emptiness and spaciousness made it seem easy for unwanted behaviour to occur, such as habitation.

DESIGN BRIEF

How might we reimagine some elements of the existing space of the telus bus shelter and make it safe and welcoming for all users within the city?

In order to find a solution to our design brief, we took our findings from visiting the site and narrowing down the existing problems to 3 main points. From then, we focused on each point and looked for a solution by referring back to our initial research findings regarding the concepts of public realm, hostile architecture, as well as utilizing CPTED's strategies.

Providing a welcoming & safe environment where users can comfortably spend their time & wait for commute

Existing Problems?

Lack of Identity

Lack of Natural Surveillance

Lack of Cleanliness

- Increase quality of "Public Realm" by working on Attractiveness, sense of place
- How can we design an identity for this space?
  ↳ Looking at Edmonton's principles of urban design/City Plan for Inspo

- corner w/ empty space enables habitation due to emptiness
- How can we implement CPTED?
  ↳ Opening up the space somehow?
- Seating in empty spaces to deter from undesired actions

- Increase in Visual identity = Increase in sense of ownership

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DESIGN INTERVENTION
VISUAL IDENTITY

As previously stated, we found the existing space to be quite empty and plain. When looking back on our findings about the concept of public realm, we learned that the quality of attractiveness can facilitate a better sense of place, which will in turn affect the general safety of a space. To do this, we thought that designing an identity for this space would be a helpful solution.

Building a visual identity for a public space allows for the opportunity to express culture, history, and identity of a community. This can allow for the opportunity to create meaningful connections between people and their environment.

Since our primary users are residents of edmonton, and the bus stop is in downtown Edmonton, we looked for visual sources of inspiration from the city of Edmonton itself, by looking at their booklets of urban design and city planning. The goal from looking over these documents was not necessarily to digest all the information and formulate a unique design from it all, but to skim through these documents and see what popped out to us or repeating images and what can provide as a meaningful source of inspiration for a visual identity because overall, they focus on the spaces of Edmonton and the development within the city. When looking through the documents, it was interesting to see how the outline of the North Saskatchewan River in the maps of Edmonton served as a focal point. We decided that it would be a good idea to use the outline of the river as a source of inspiration. Not only is it an interesting silhouette, but Edmonton also values the importance of conserving and respecting its natural environment.

The image displayed on the right is our mood board for our visual identity. We focused on using yellow and blue tones from edmonton's color palette, because ets' main color is blue, and using yellow as a secondary color brings contrast to the visuals. Using the outline of the river and playing around with the lines and orientation helps bring an interesting visual that also holds a deeper meaning. The curves allowed us to work with organic shapes in general so we looked at organic shapes for inspiration as well.
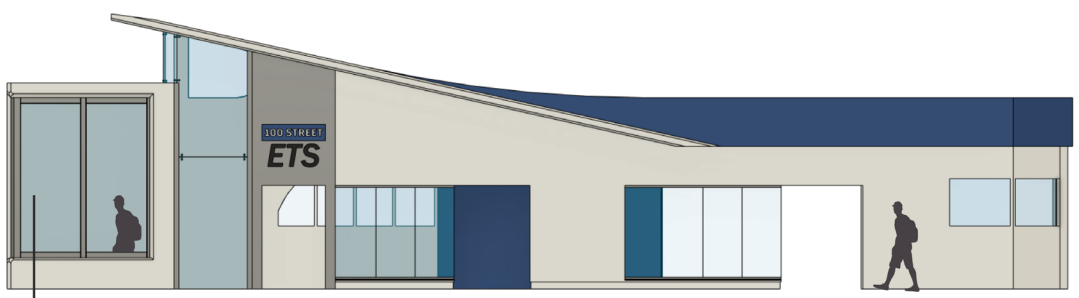
DESIGN INTERVENTION
NATURAL SURVEILLANCE

When looking to improve the natural surveillance of the bus shelter, we specifically took interest in the empty space in the corner, as it enables habitation due to its openness and emptiness. So how can we implement CPTED's strategy of natural surveillance to deter this certain behaviour from happening?

We decided that making minor structural changes would increase natural surveillance around the site. For one, the corner would structurally change to larger windows in order to maximize the visibility, allowing the public to look in and observe. Additionally, the roof has been raised to allow more sunlight into the shelter.

An entrance has additionally been added to the backside, allowing for more traffic, facilitating people to enter and exit in different directions.

Windows on the south is set as a full-length window to the top

Left garden removed to provide a better sight outside

Pros

High visibility (natural surveillance)
Maximize visibility by designing doors and windows to look into public areas, keeping intruders under observation.

An adequate illumination of public area enhance the harmonious coexistence between man and nature, and promote people's physical and mental health and happiness
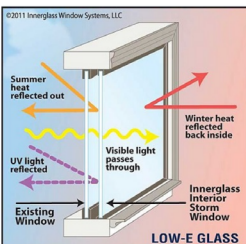
Sunlight
Windows in the south can make full use of the sun's light and heat, improve indoor lighting and thermal insulation effects, and save energy consumption, especially in winter.

The lower the window position, the higher the illumination value in the room and the lower the lighting energy consumption. However, the lower the window position, the lower the indoor **visual comfort** will be.

Cons

Maintenance
Windows in the south are also affected by southerly winds, which usually carry more moisture and dust and requires more frequent maintenance.

Vandalism
Easily seen or broken by people or objects from the outside

Heat (from sunlight)
For example, in summer, the indoors will be too bright and hot, and you need to install shading facilities or use air conditioning to adjust the indoor light and temperature.

However, this kind of visual discomfort can also be used to control the time people stay here, such as controlling the glare, uniformity, intensity, heat, etc. of light reflected by the glass to preventing people from over staying.

©2011 Innerglass Window Systems, LLC

Summer heat reflected out

Winter heat reflected back inside

UV light reflected

Visible light passes through

Existing Window

Innerglass Interior Storm Window

LOW-E GLASS

A handful of additional options are available if visitor comfortability has to be considered, such as pyrolytic low emission windows or low-reflective glass/shades.
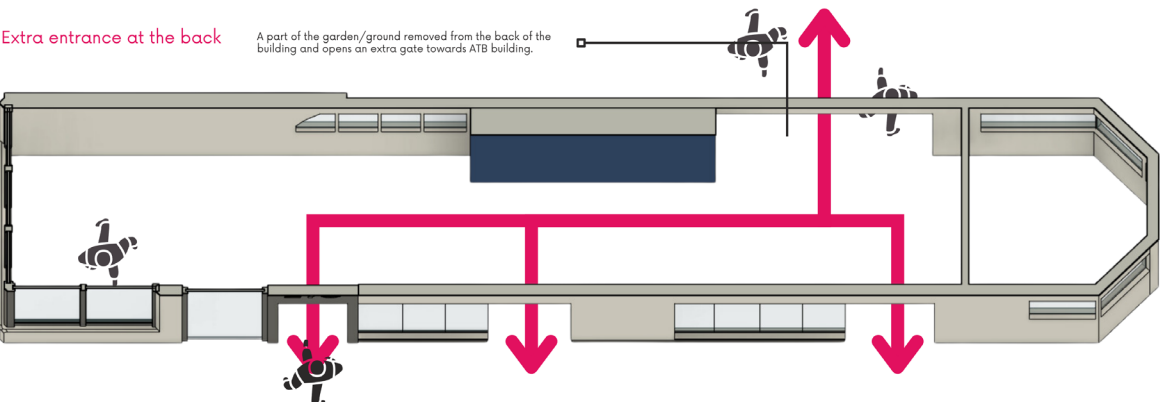

Extra entrance at the back

A part of the garden/ground removed from the back of the building and opens an extra gate towards ATB building.

Multiple Entrances

Traffic efficiency and flexibility
Multiple entrances can facilitate the entry and exit of people from different directions and purposes. It is a relatively common design technique to guide the flow of visitors to the entrance transition space through the guidance space. Guiding the main flow direction can be divided into linear type by presenting a significantly larger gate at the back of the building.

Security and emergency
For a public space, multiple entrance can avoid congestion and danger, and create a built environment easy for evacuation and rescue in emergency situations. Generally, two exits need to be in the same space. In a single-passage space, once one of the entrances and exits of the space becomes unusable, people will not be able to escape smoothly.

Spatial form and functional layout
Multiple entrances and exits can increase the efficiency and flexibility of public buildings and facilitate the entry and exit of people from different directions and purposes. For example, the east and west entrances are connected to the bus station and the Back pedestrian walk way to the ATB building respectively, making transportation convenient for the visitors without having to moving around the bus station and active the space and flow.

DESIGN INTERVENTION
CLEANLINESS

When individuals are disconnected from their surroundings and do not feel ownership or sense of community, they become far more likely to engage in habits that are not environmentally sustainable. As mentioned previously, adding visual identity adds enhancement to the space - not only visually, but also in providing a sense of character and community. Therefore, although its quite difficult to predict people and their littering habits, hopefully, building this meaningful sense of community and shared responsibility through this new visual identity can result in a reduction in the overall amount of pollution and waste
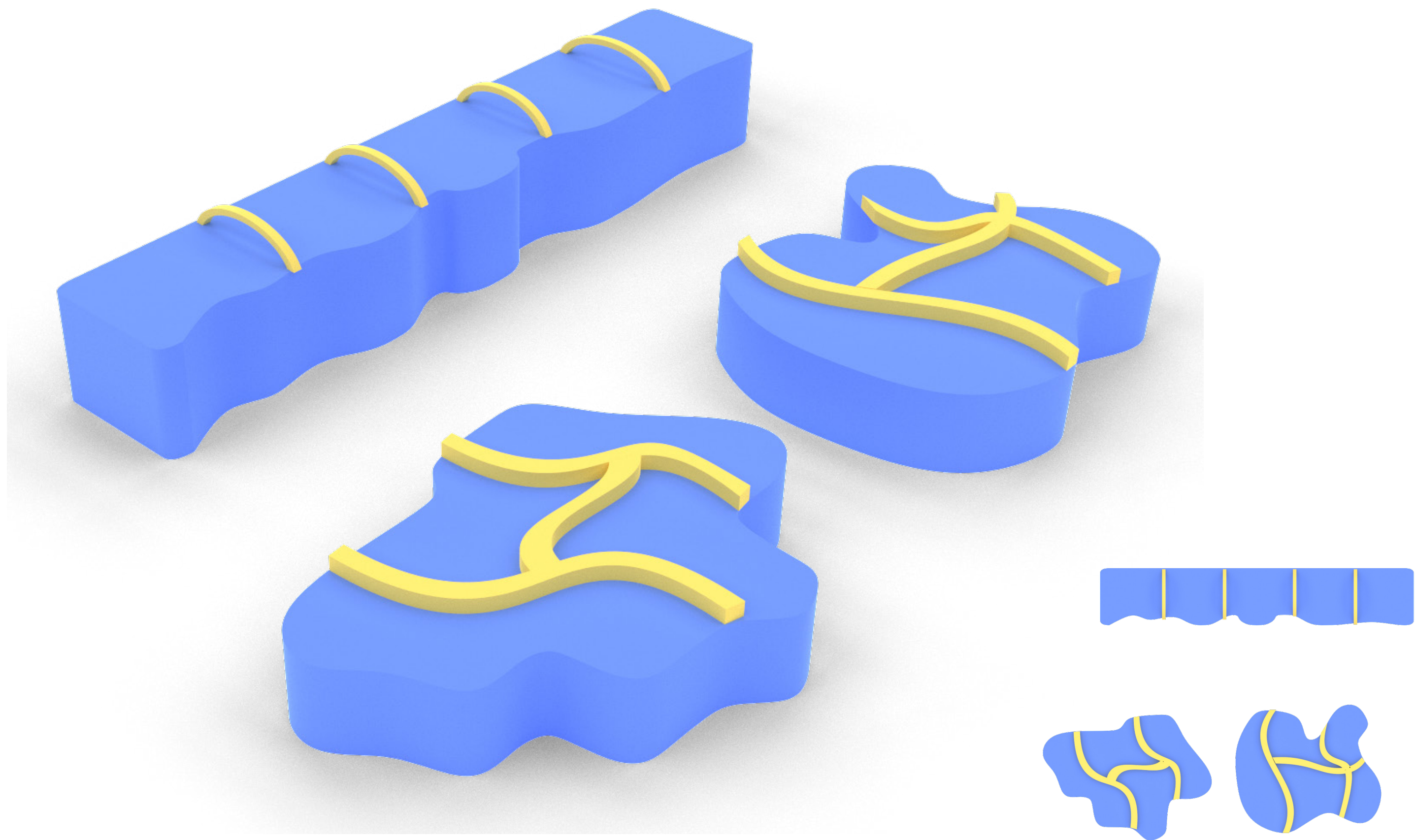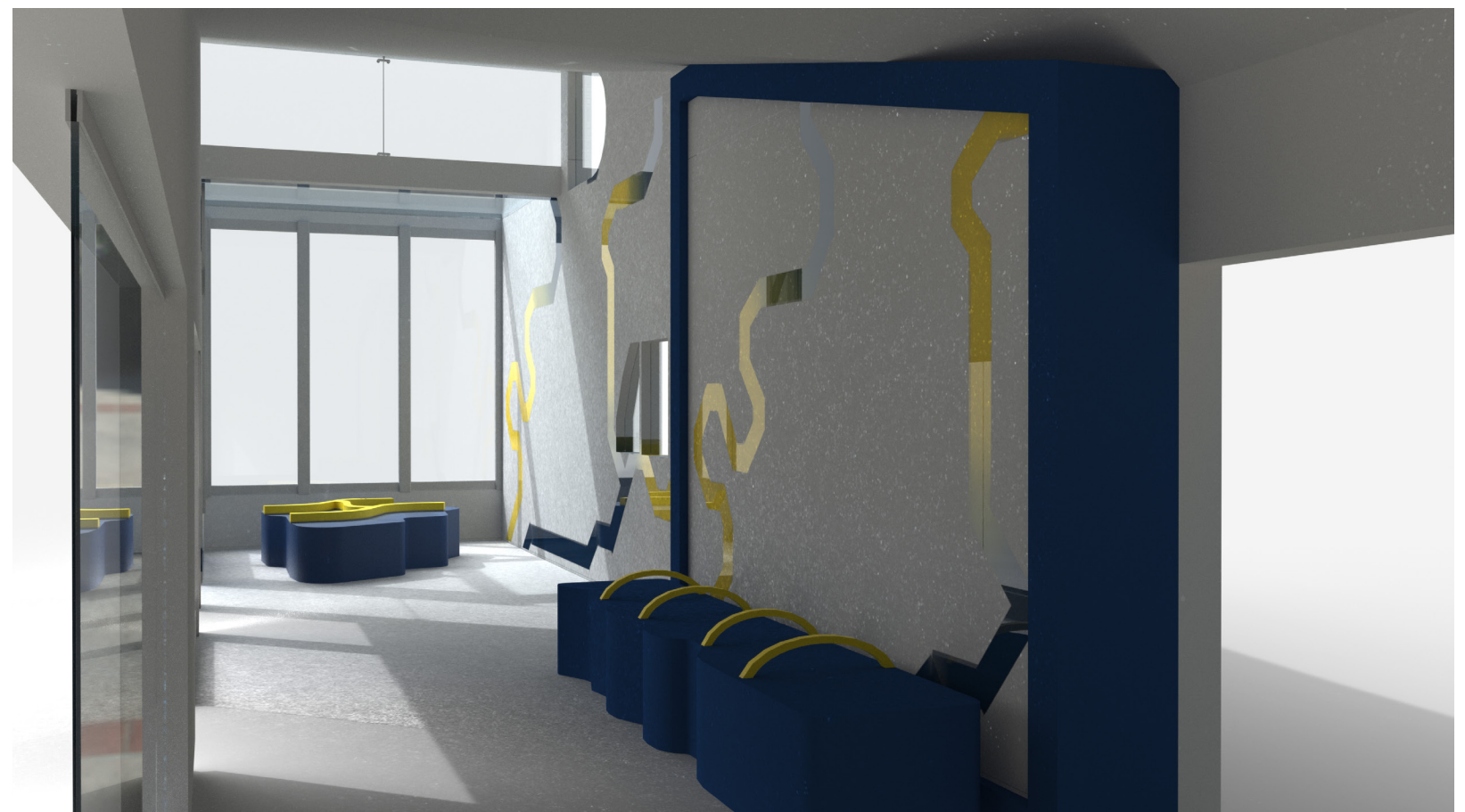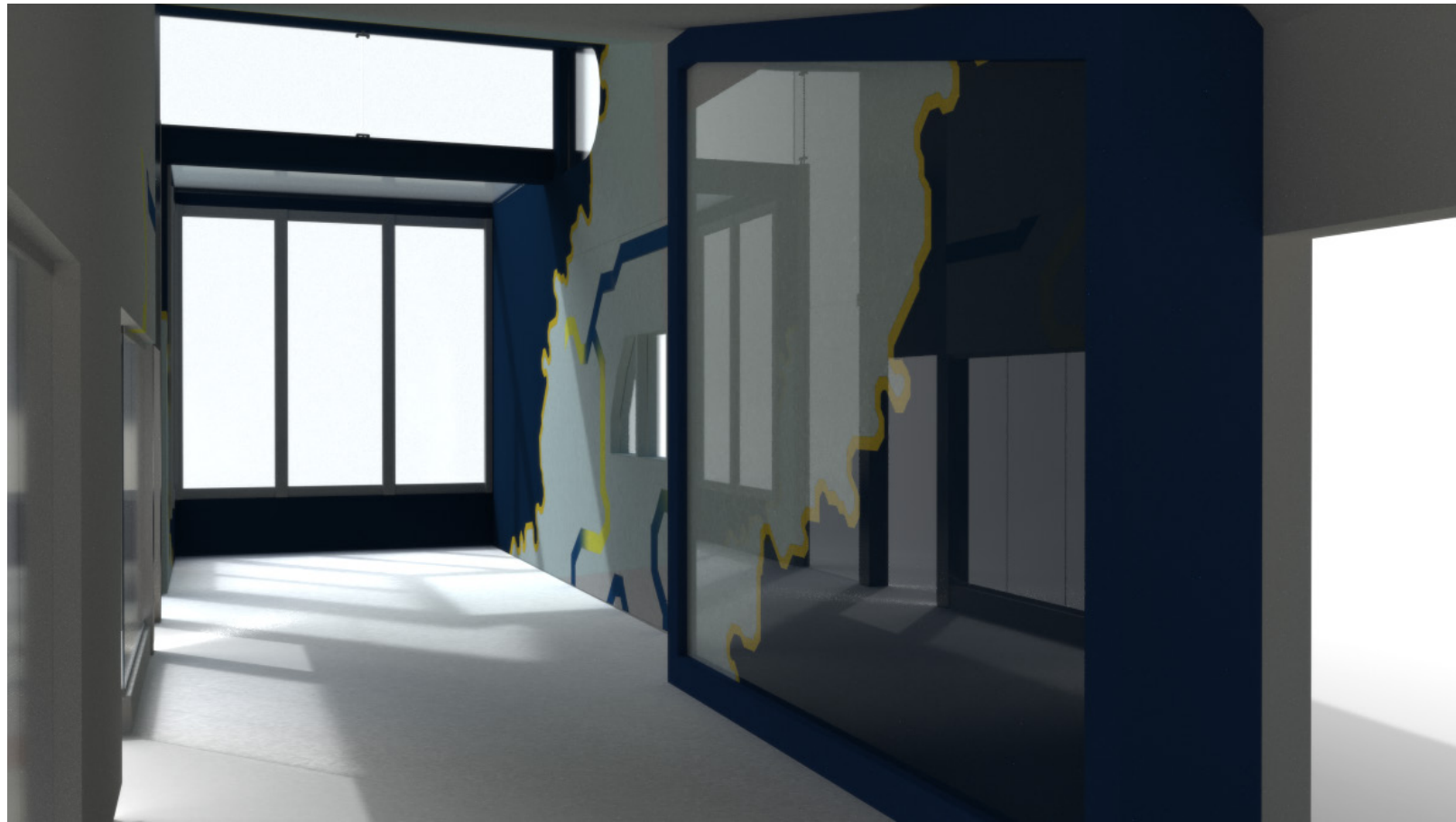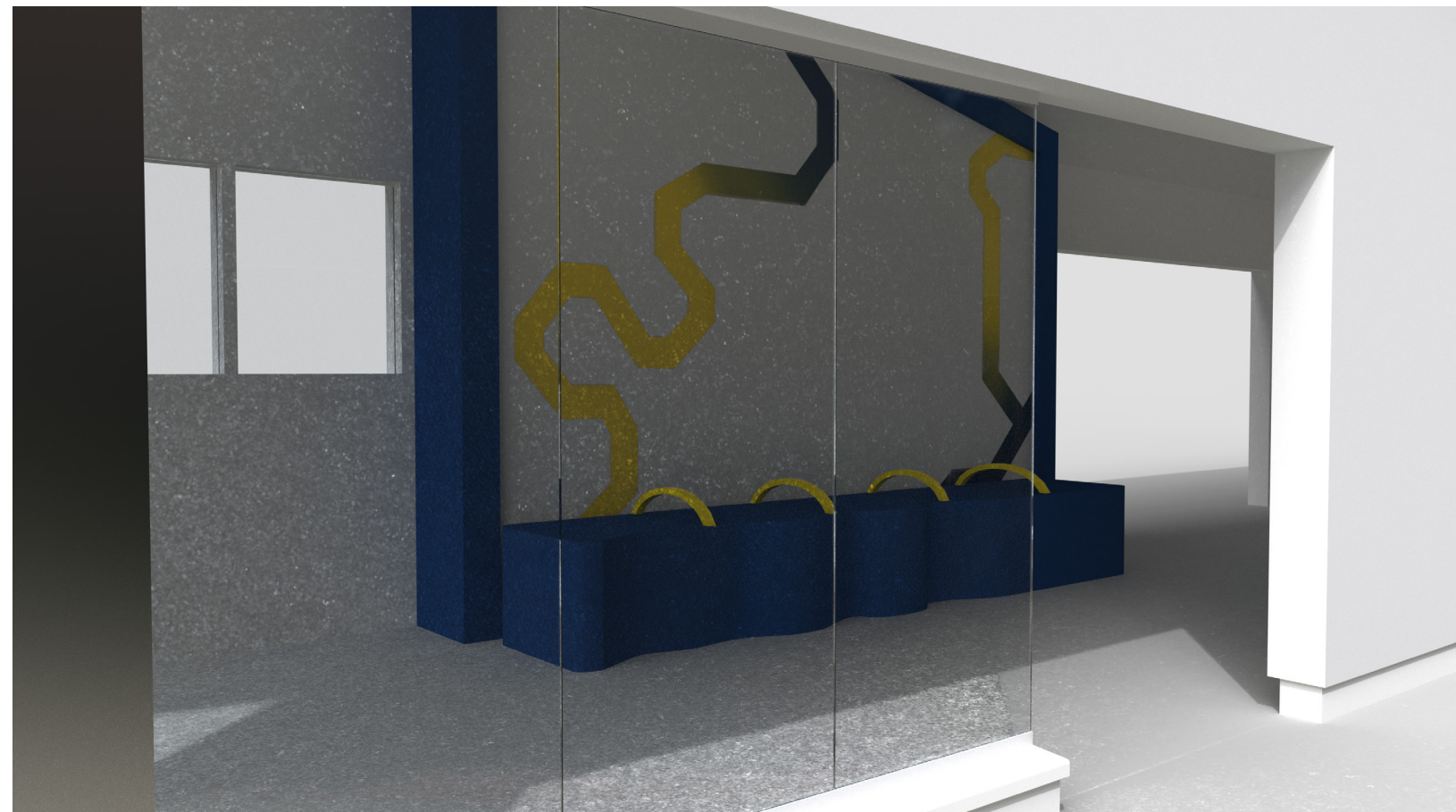

Image taken by Yimeng

RENDERS

ORTHOGRAPHICS

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Group: 3	Course: DES 502		
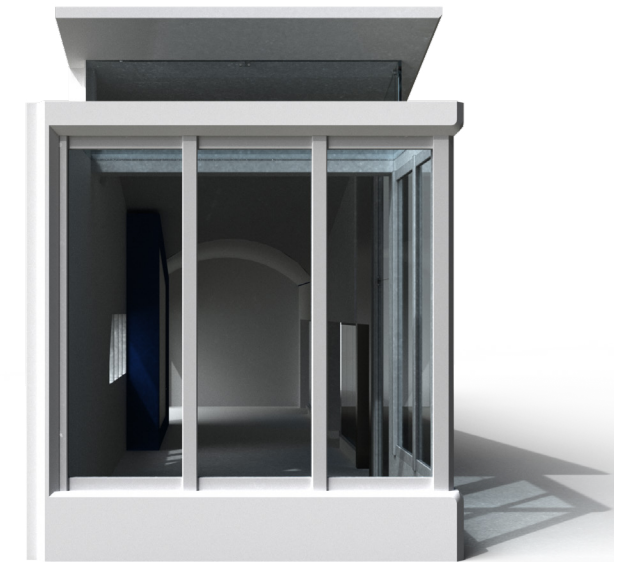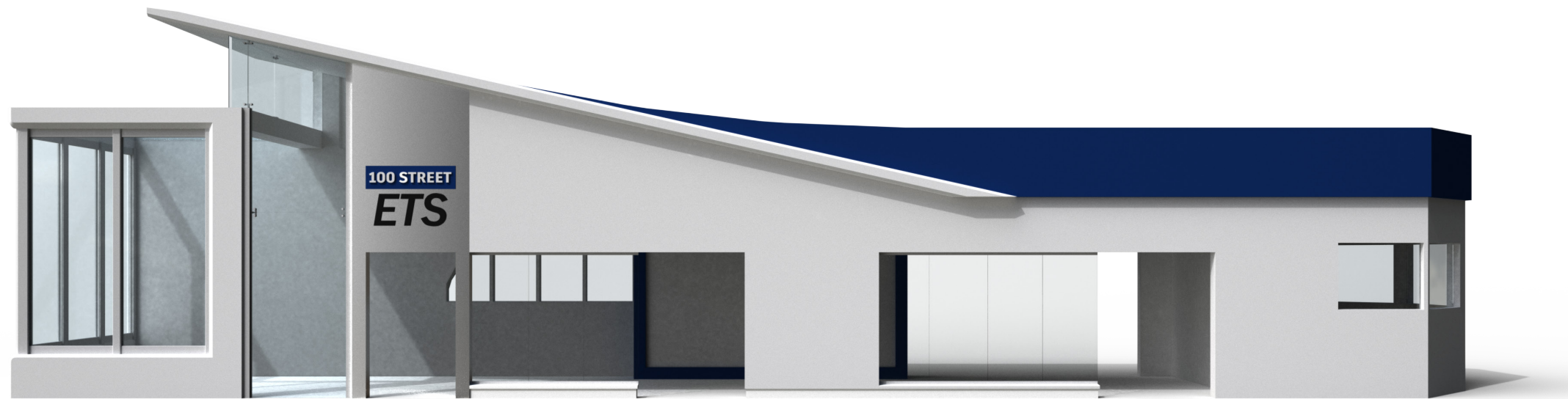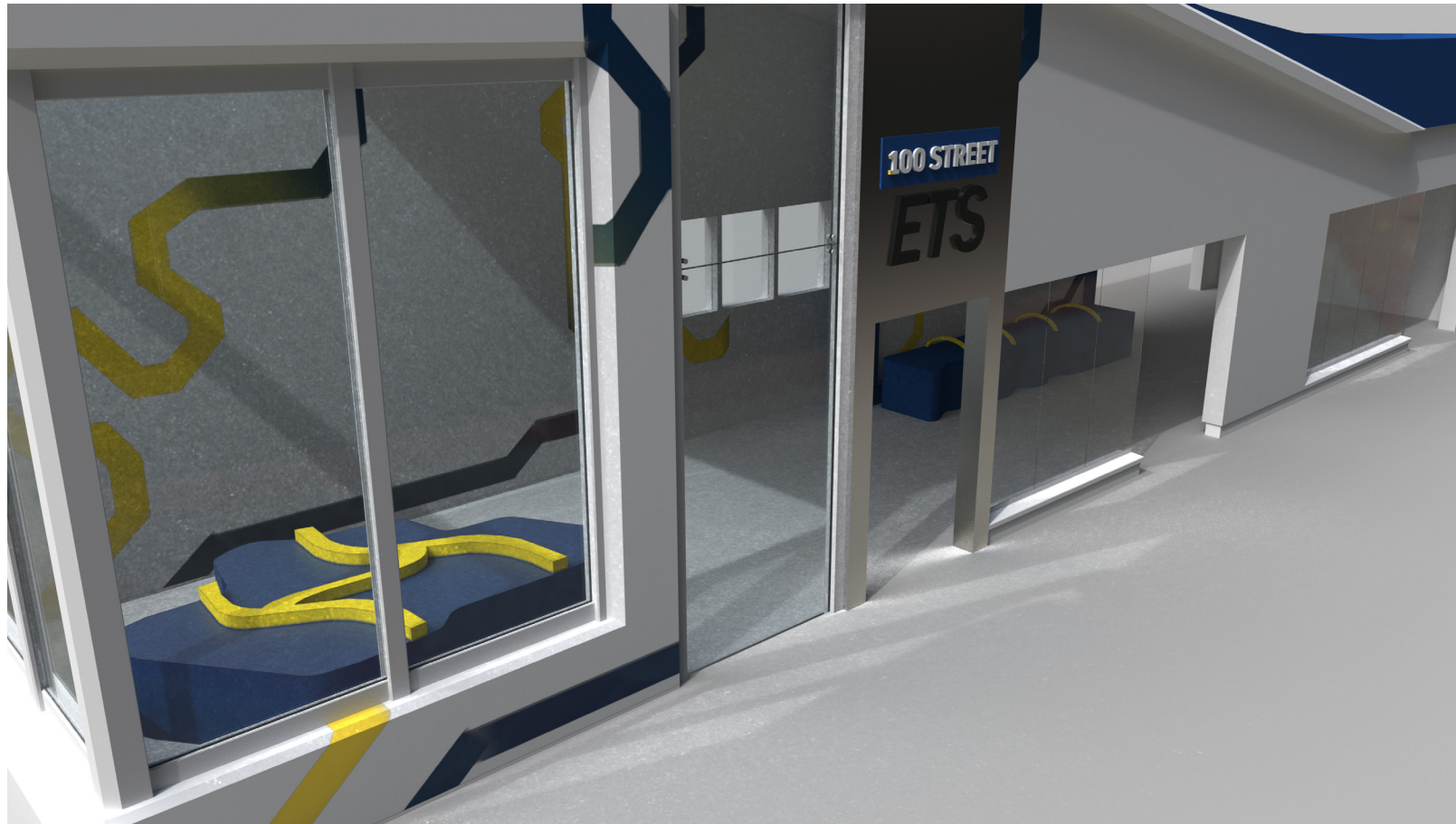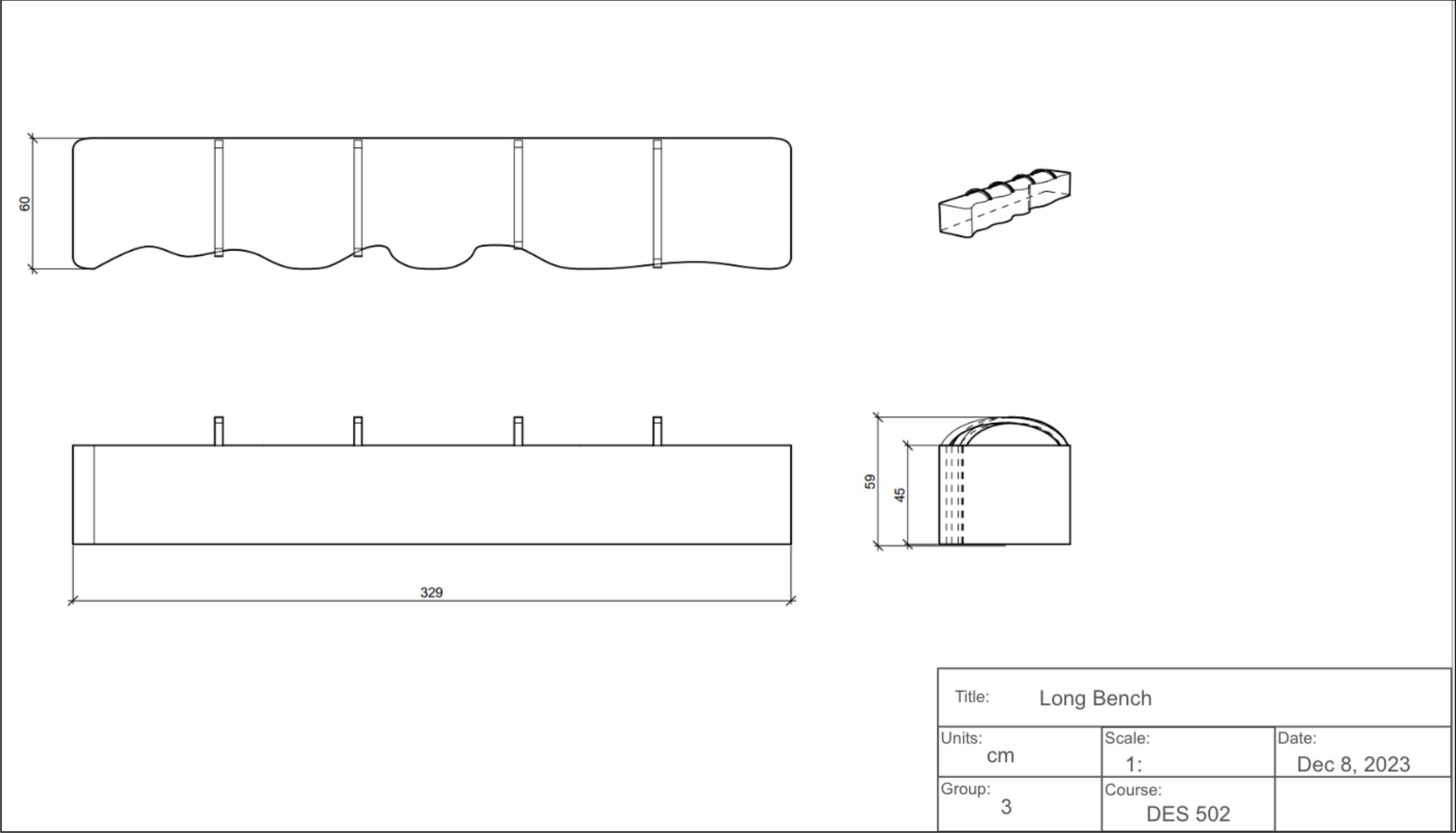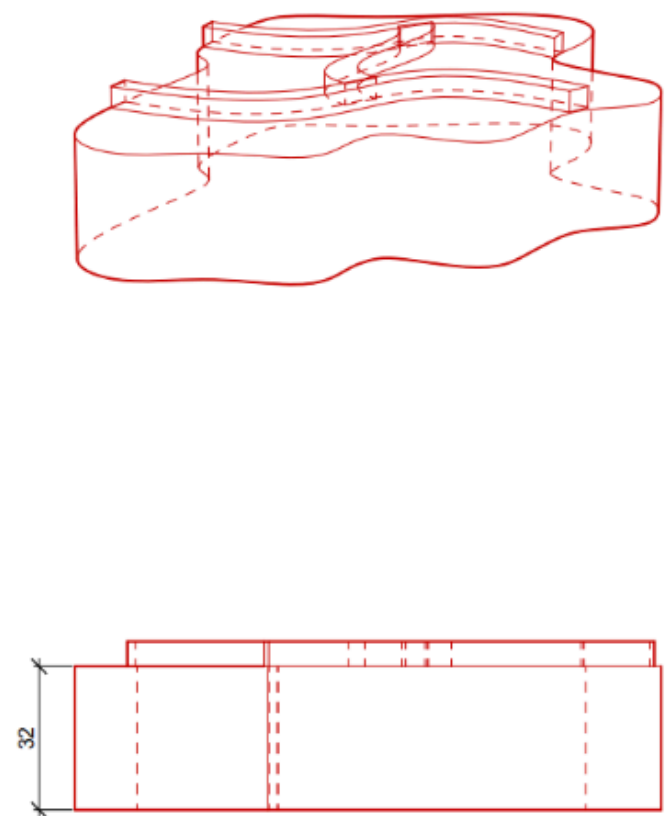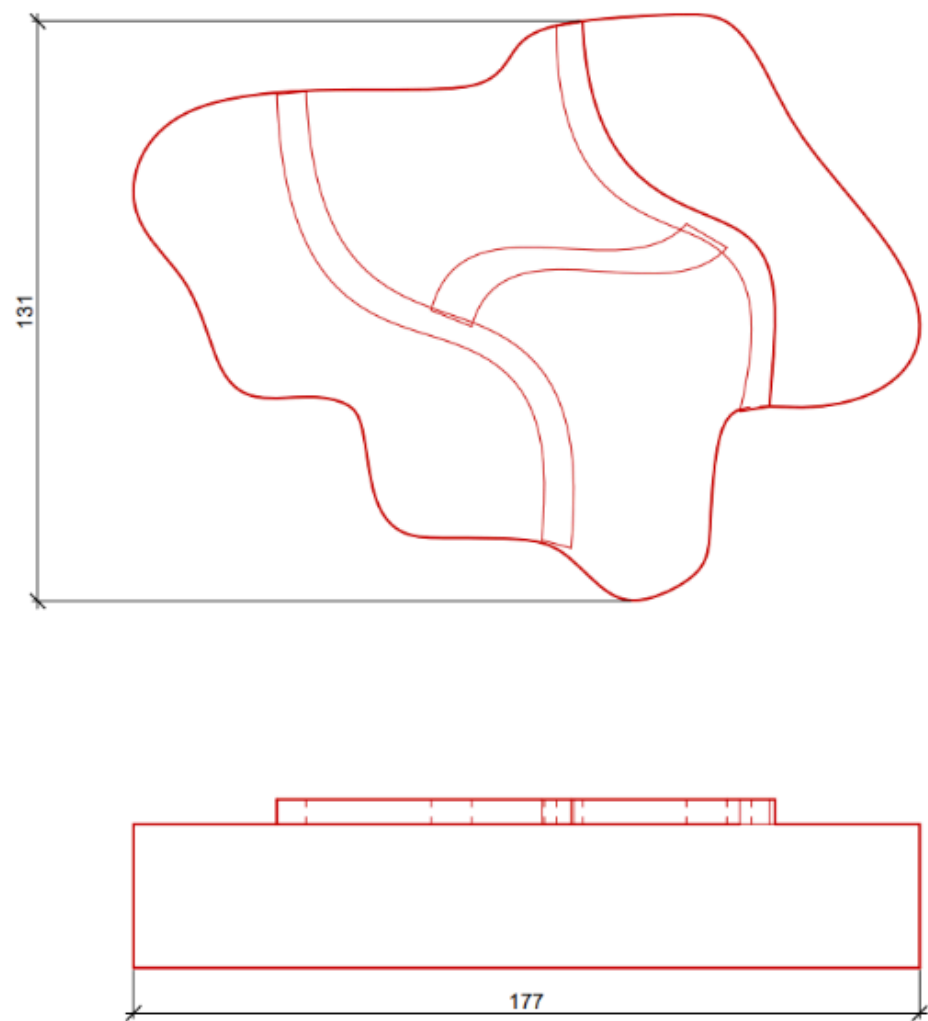
ORTHOGRAPHICS

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Group: 3	Course: DES 502		

ORTHOGRAPHICS

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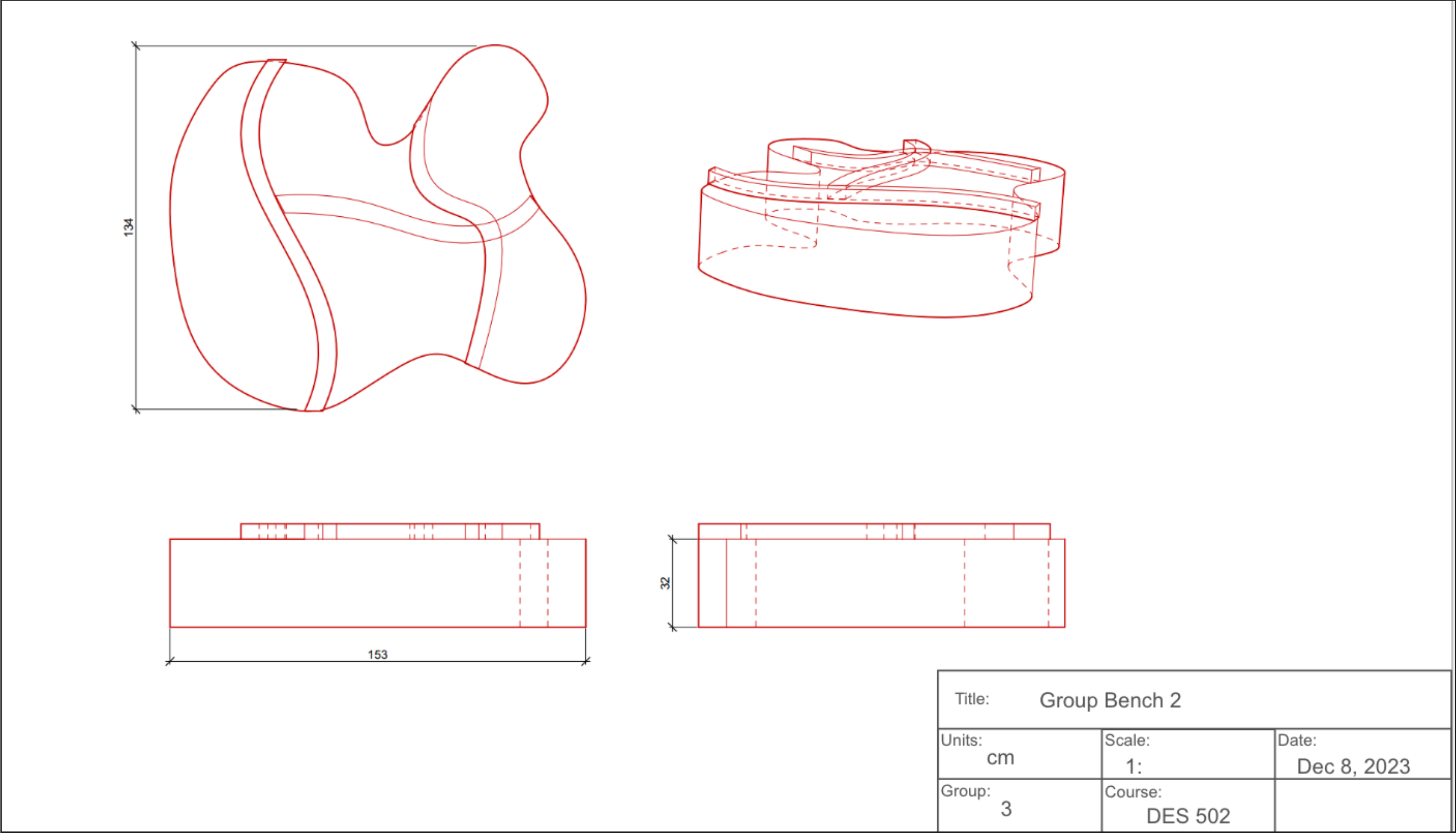
POSTER

Telus bus shelter

A design solution for the Telus bus shelter that maximizes comfort for all people while addressing safety concerns.

Our reimagined design proposal of the Telus Bus Shelter captures qualities inspired by the city of edmonton's natural elements, specifically, the north saskatchewan river. This new visual identity of the shelter allows for the users in the community to create meaningful connections with the space. We additionally added openness within the shelter with additional windows and openings to allow for greater traffic flow and natural surveillance, to enhance the safety and comfort for the users of the space.

Kristen Padilla, Yimeng Tong, Leo Zhan   City of Edmonton   University of Alberta

APPENDIX

100 STREET
ETS

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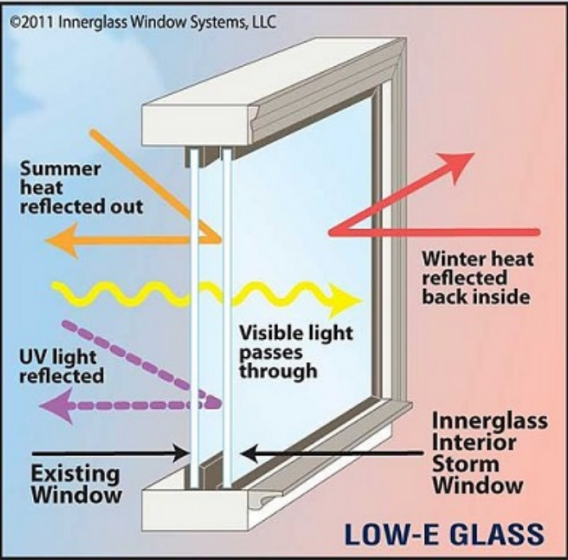
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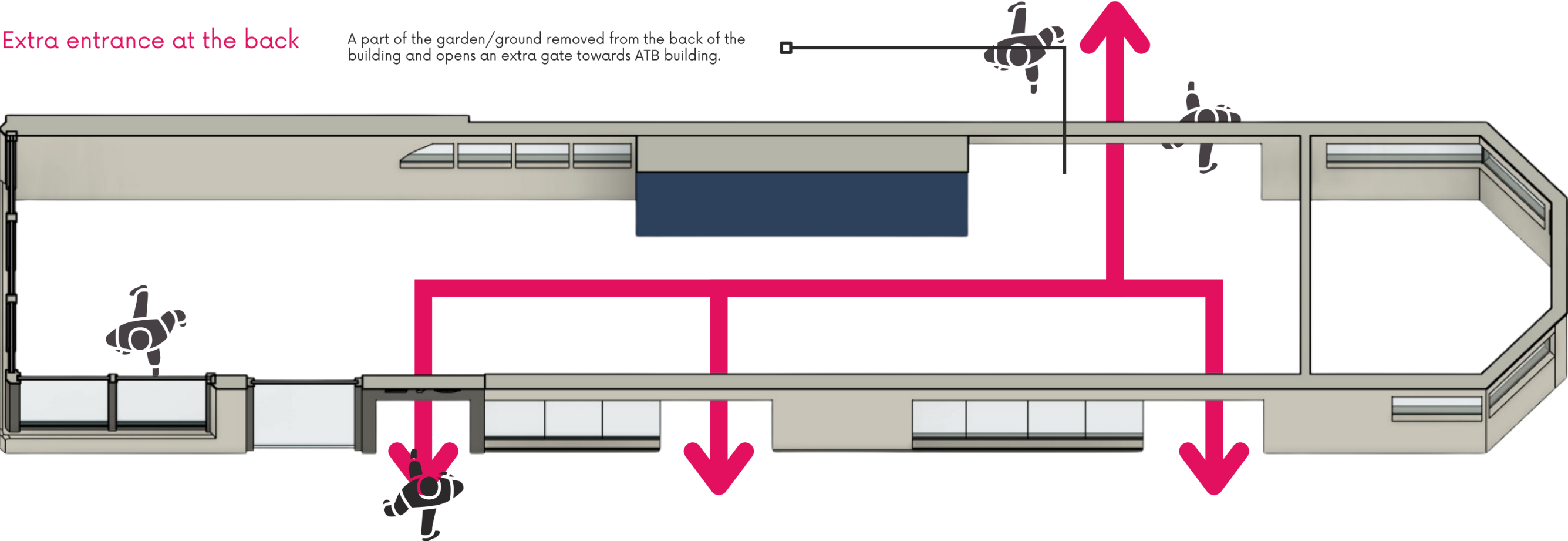

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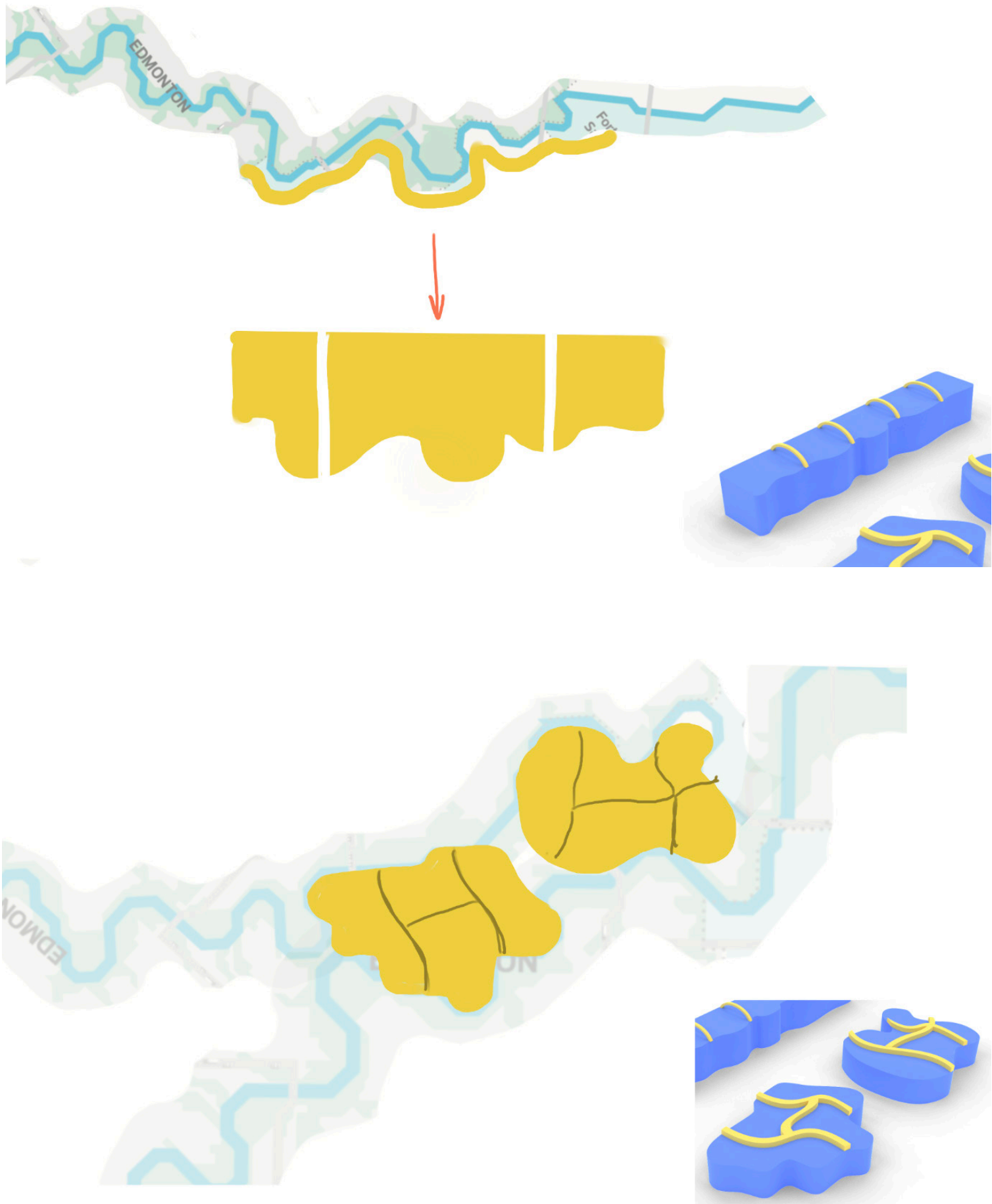
Seating Areas - Materials

Recycled Plastic

-100% recycled HDPE (high-density polyethylene)
-Non-porous, inorganic, can not absorb water, can not rot
-Little maintenance
-Environmentally sustainable, lasts for decades
-Wide variety of colors can be used
-Cost-effective, reduced maintenance costs

CONS
-Lightweight
-Requires some sort of fastening

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