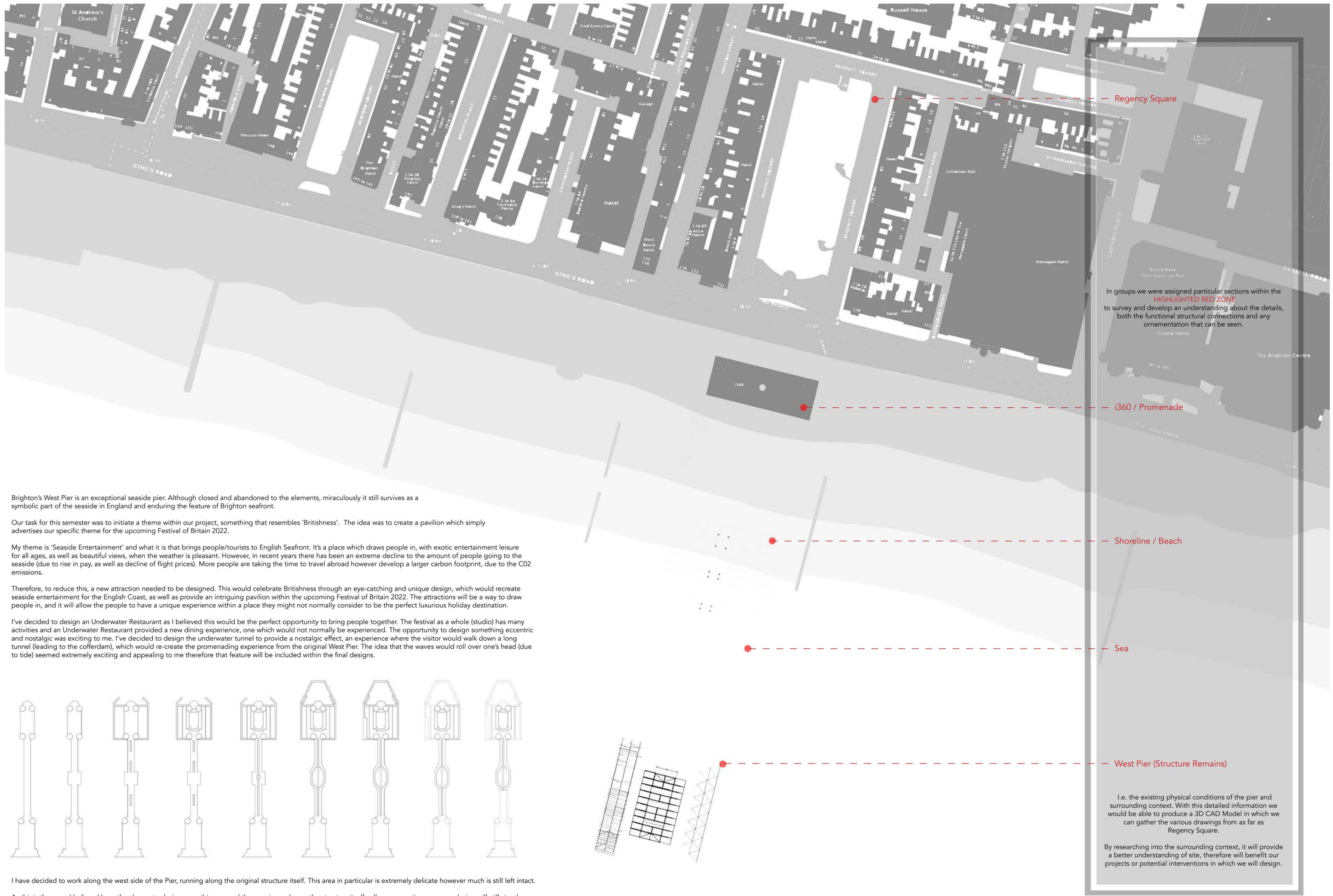


Bare · Labyrinth · Underwater · Experience

FIONA - AINA QUARTERMAINE
AD676 - Design 4: Experience and Systems



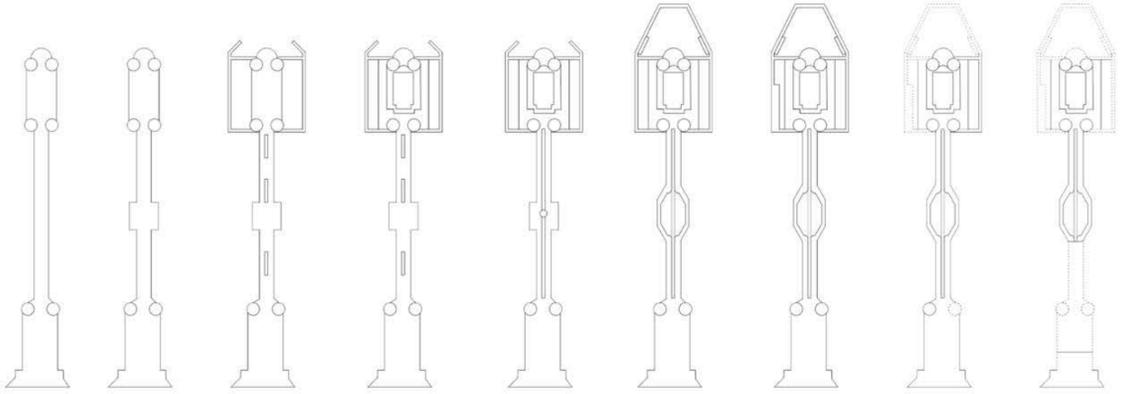
Brighton's West Pier is an exceptional seaside pier. Although closed and abandoned to the elements, miraculously it still survives as a symbolic part of the seaside in England and enduring the feature of Brighton seafront.

Our task for this semester was to initiate a theme within our project, something that resembles 'Britishness'. The idea was to create a pavilion which simply advertises our specific theme for the upcoming Festival of Britain 2022.

My theme is 'Seaside Entertainment' and what it is that brings people/tourists to English Seaford. It's a place which draws people in, with exotic entertainment leisure for all ages, as well as beautiful views, when the weather is pleasant. However, in recent years there has been an extreme decline to the amount of people going to the seaside (due to rise in pay, as well as decline of flight prices). More people are taking the time to travel abroad however develop a larger carbon footprint, due to the CO2 emissions.

Therefore, to reduce this, a new attraction needed to be designed. This would celebrate Britishness through an eye-catching and unique design, which would recreate seaside entertainment for the English Coast, as well as provide an intriguing pavilion within the upcoming Festival of Britain 2022. The attractions will be a way to draw people in, and it will allow the people to have a unique experience within a place they might not normally consider to be the perfect luxurious holiday destination.

I've decided to design an Underwater Restaurant as I believed this would be the perfect opportunity to bring people together. The festival as a whole (studio) has many activities and an Underwater Restaurant provided a new dining experience, one which would not normally be experienced. The opportunity to design something eccentric and nostalgic was exciting to me. I've decided to design the underwater tunnel to provide a nostalgic effect, an experience where the visitor would walk down a long tunnel (leading to the cofferdam), which would re-create the promenading experience from the original West Pier. The idea that the waves would roll over one's head (due to tide) seemed extremely exciting and appealing to me therefore that feature will be included within the final designs.



I have decided to work along the west side of the Pier, running along the original structure itself. This area in particular is extremely delicate however much is still left intact.

As this is the case, I believe I have the chance to design something around the remains and once the structure itself collapses over time, my new design will still stand, once supported by the West Pier. However now, with a section removed, a metaphor displaying a chunk of history demolished, the history/story of the West Pier. The connection will be made via clamps which will be connected to the original structure.

Regency Square

In groups we were assigned particular sections within the HIGHLIGHTED RED ZONE to survey and develop an understanding about the details, both the functional structural connections and any ornamentation that can be seen.

i360 / Promenade

Shoreline / Beach

Sea

West Pier (Structure Remains)

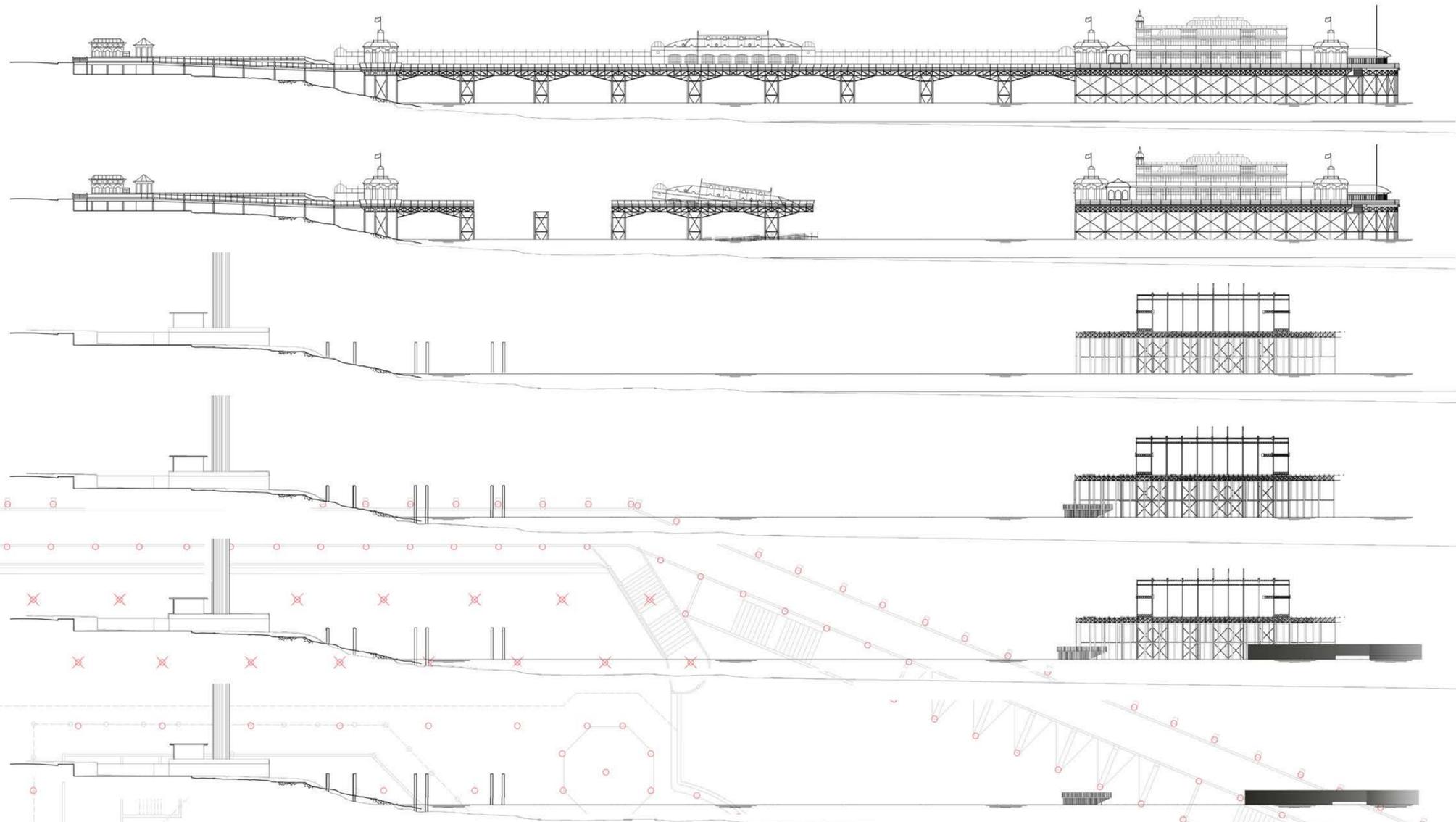
I.e. the existing physical conditions of the pier and surrounding context. With this detailed information we would be able to produce a 3D CAD Model in which we can gather the various drawings from as far as Regency Square.

By researching into the surrounding context, it will provide a better understanding of site, therefore will benefit our projects or potential interventions in which we will design.

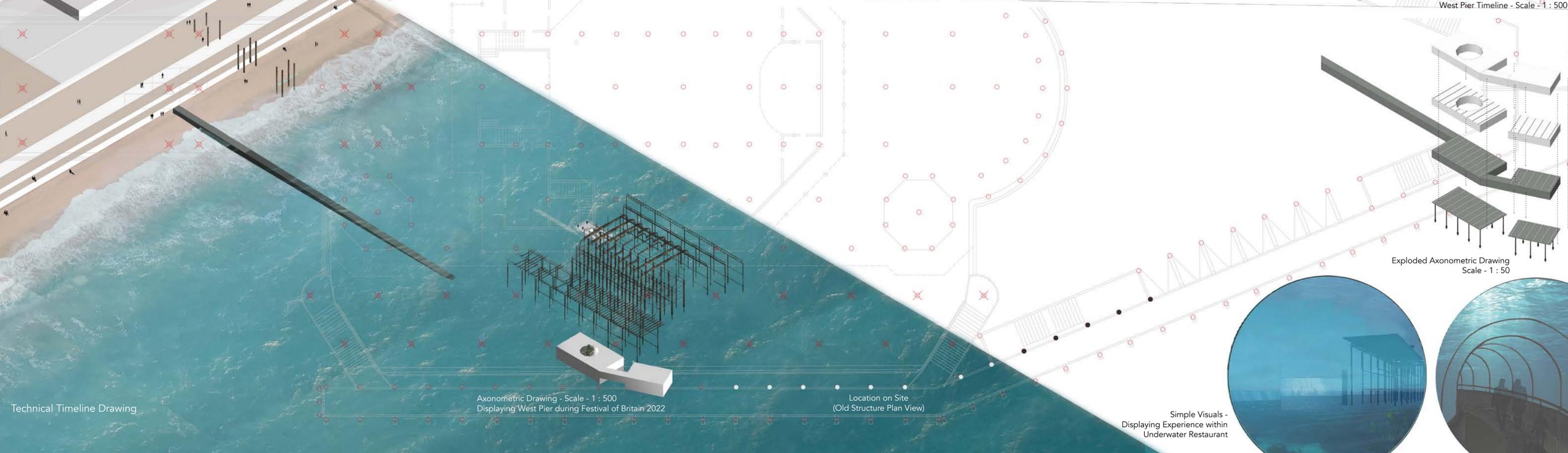




Technical Timeline Drawing



West Pier Timeline - Scale - 1 : 500

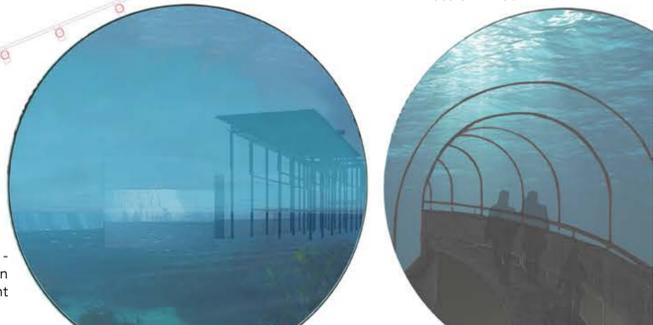


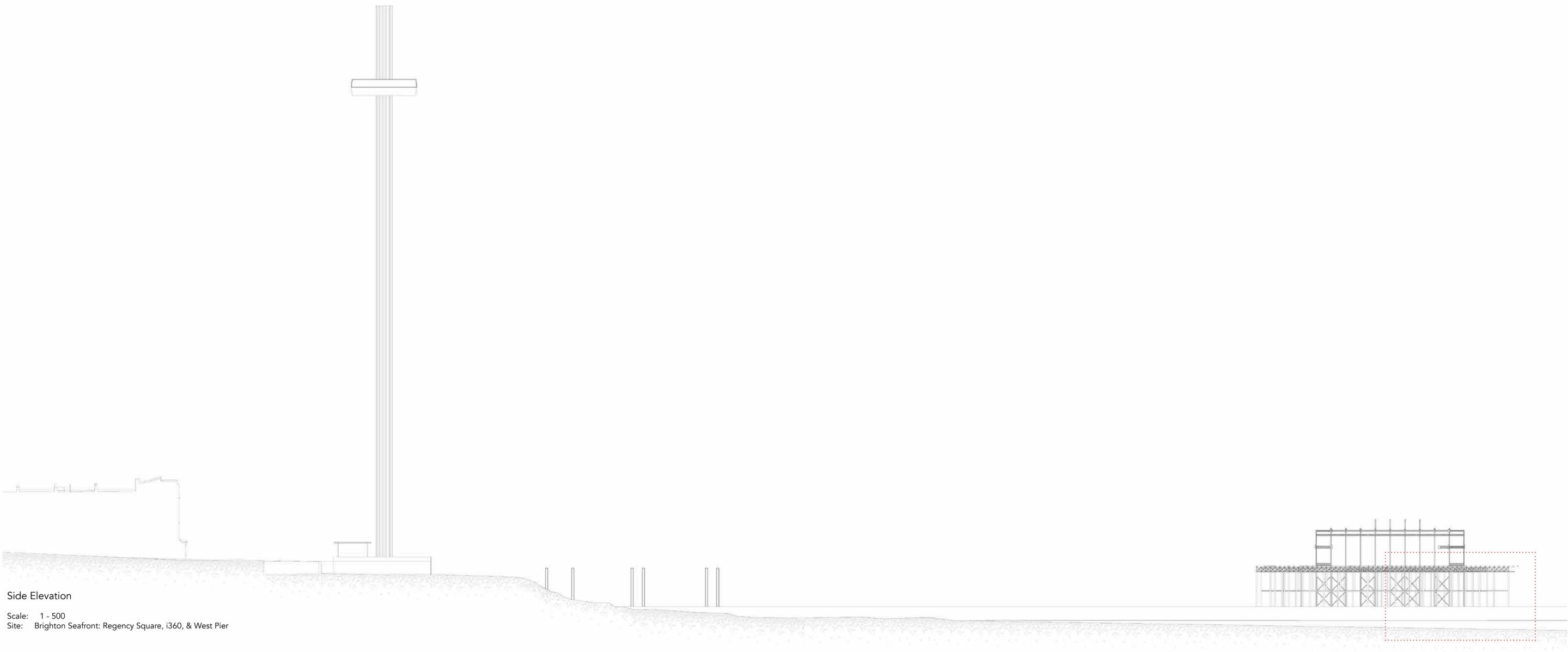
Axonometric Drawing - Scale - 1 : 500
Displaying West Pier during Festival of Britain 2022

Location on Site
(Old Structure Plan View)

Exploded Axonometric Drawing
Scale - 1 : 50

Simple Visuals -
Displaying Experience within
Underwater Restaurant





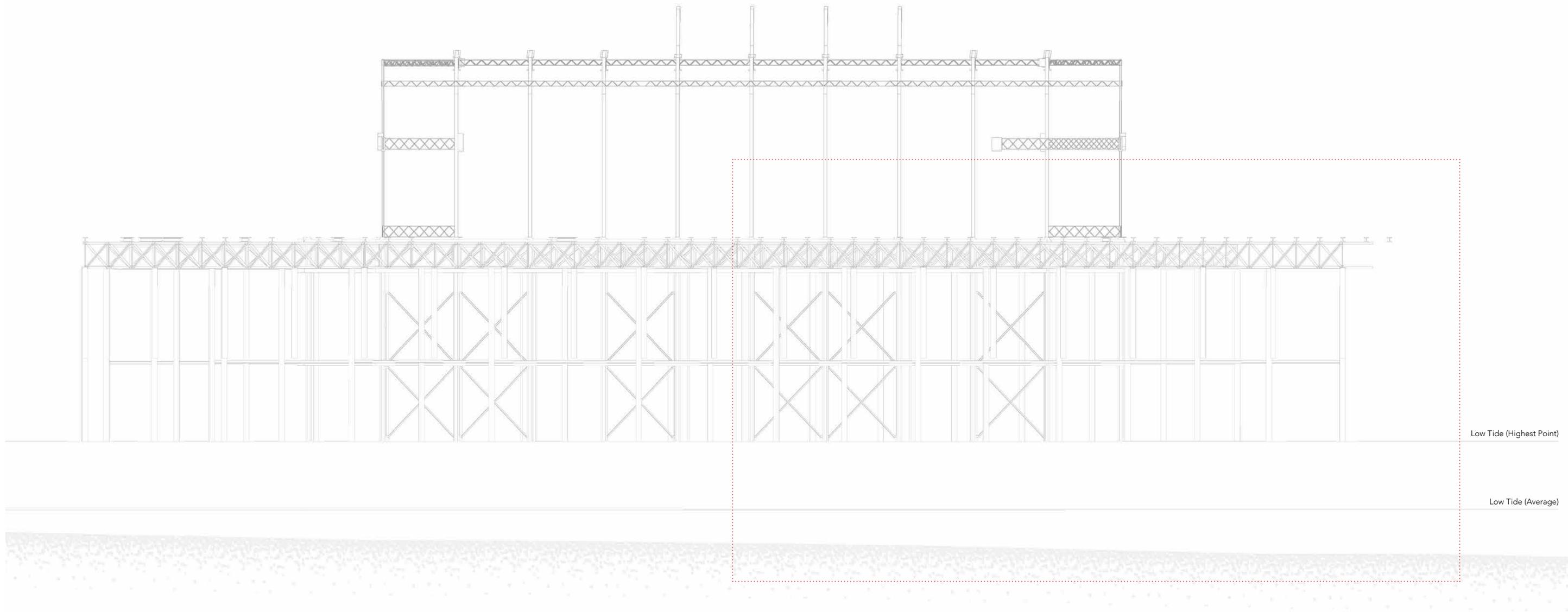
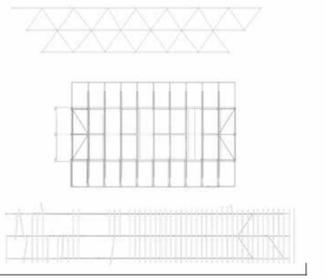
Side Elevation

Scale: 1 - 500
Site: Brighton Seafront: Regency Square, i360, & West Pier



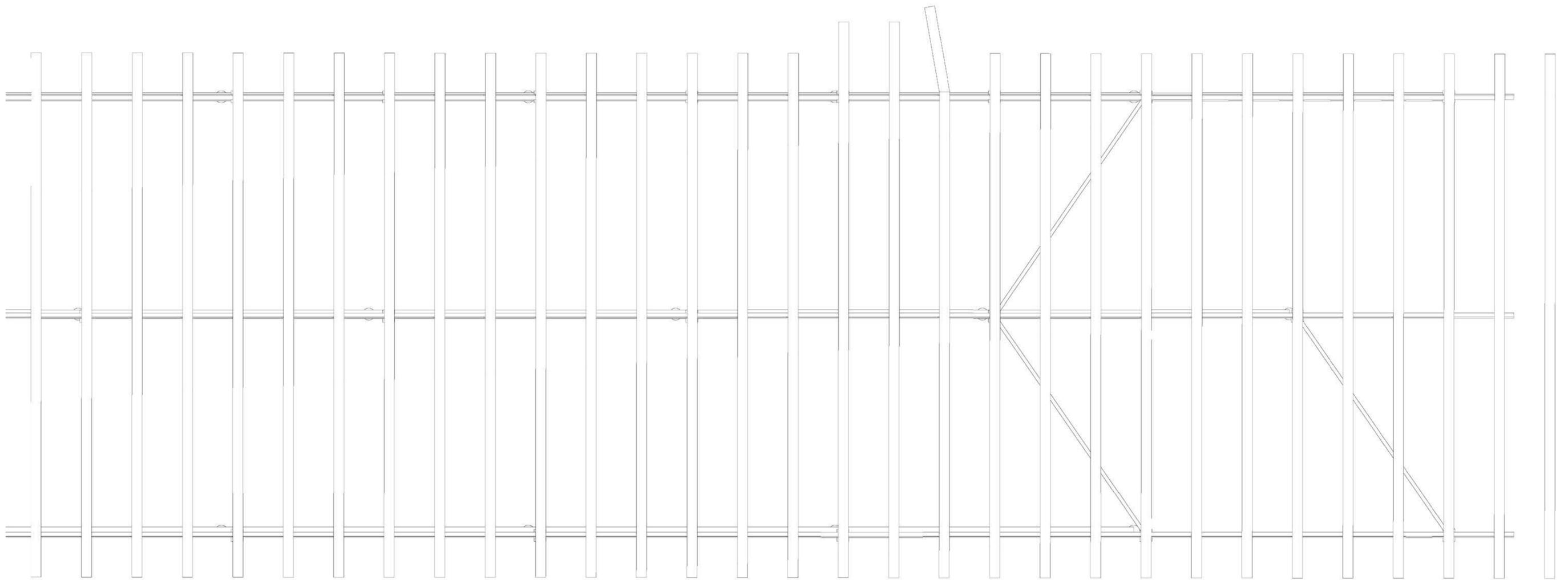
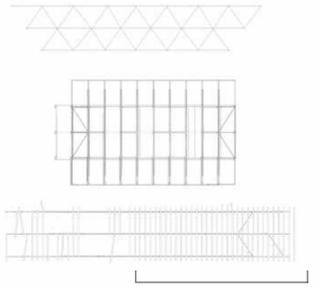
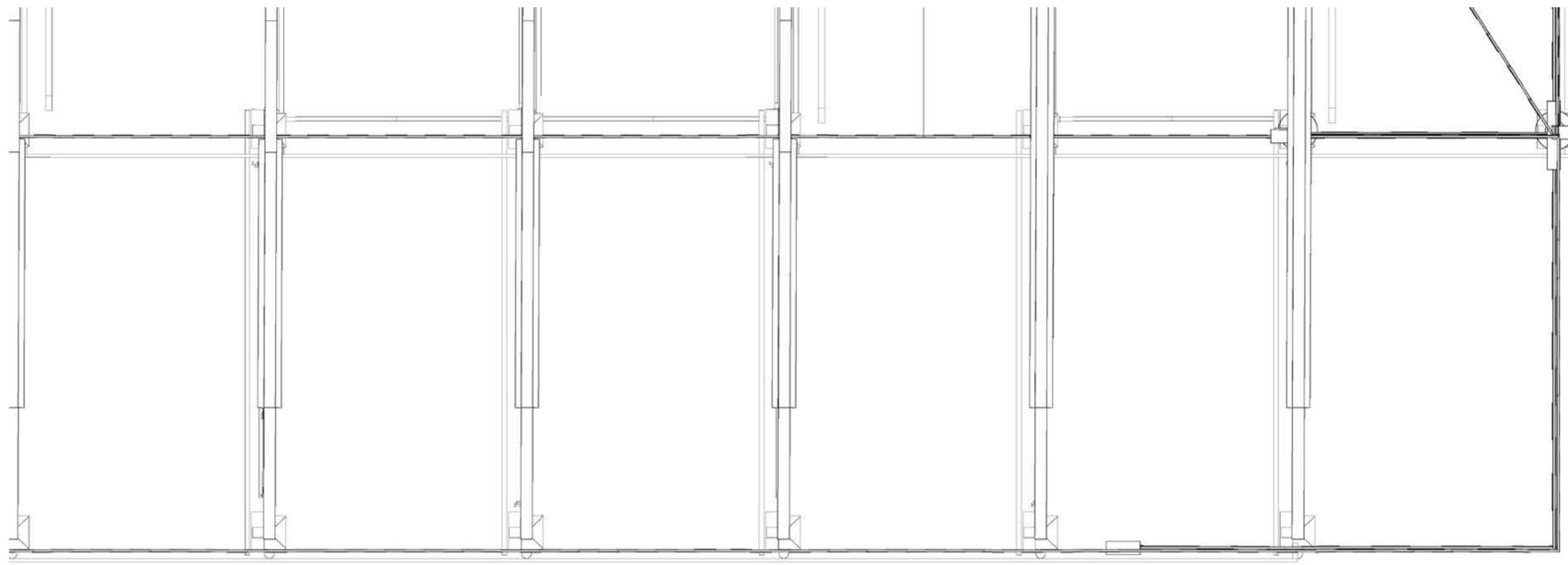
Plan Elevation

Scale: 1 - 500



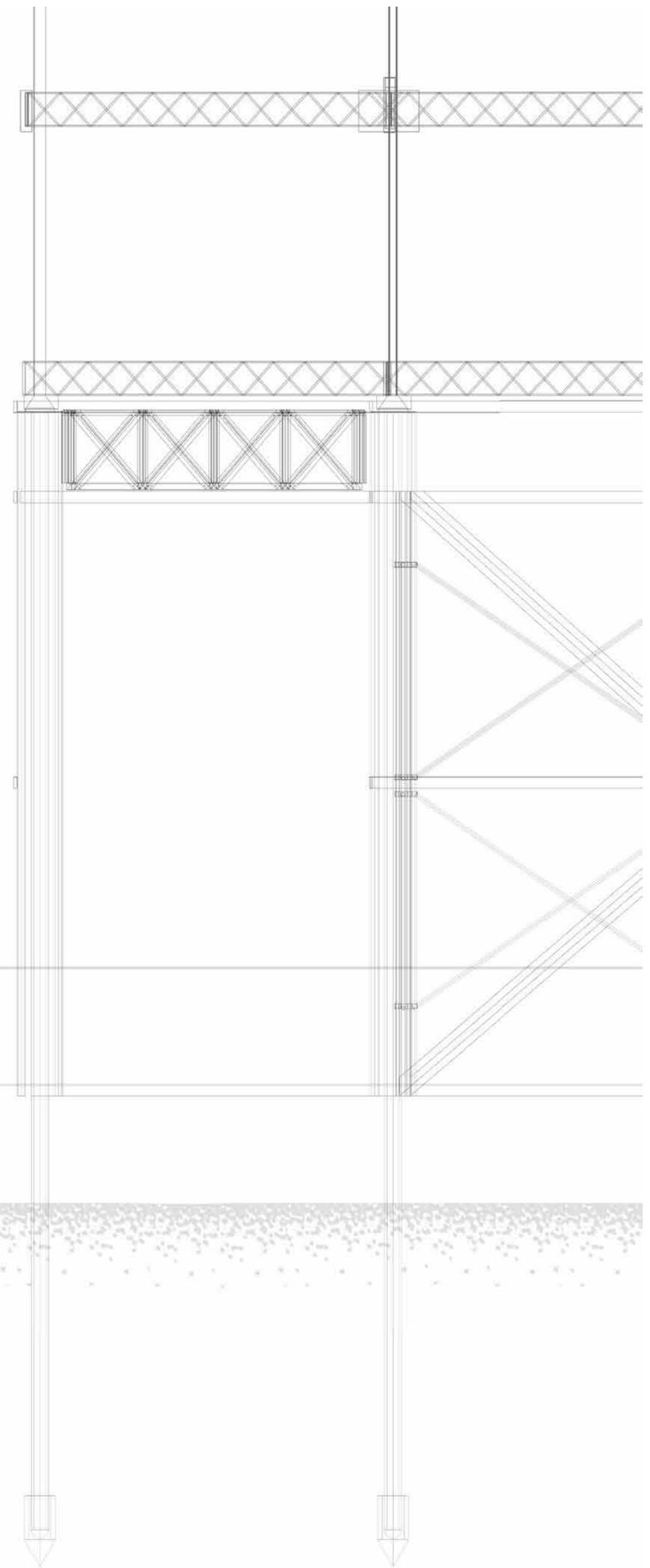
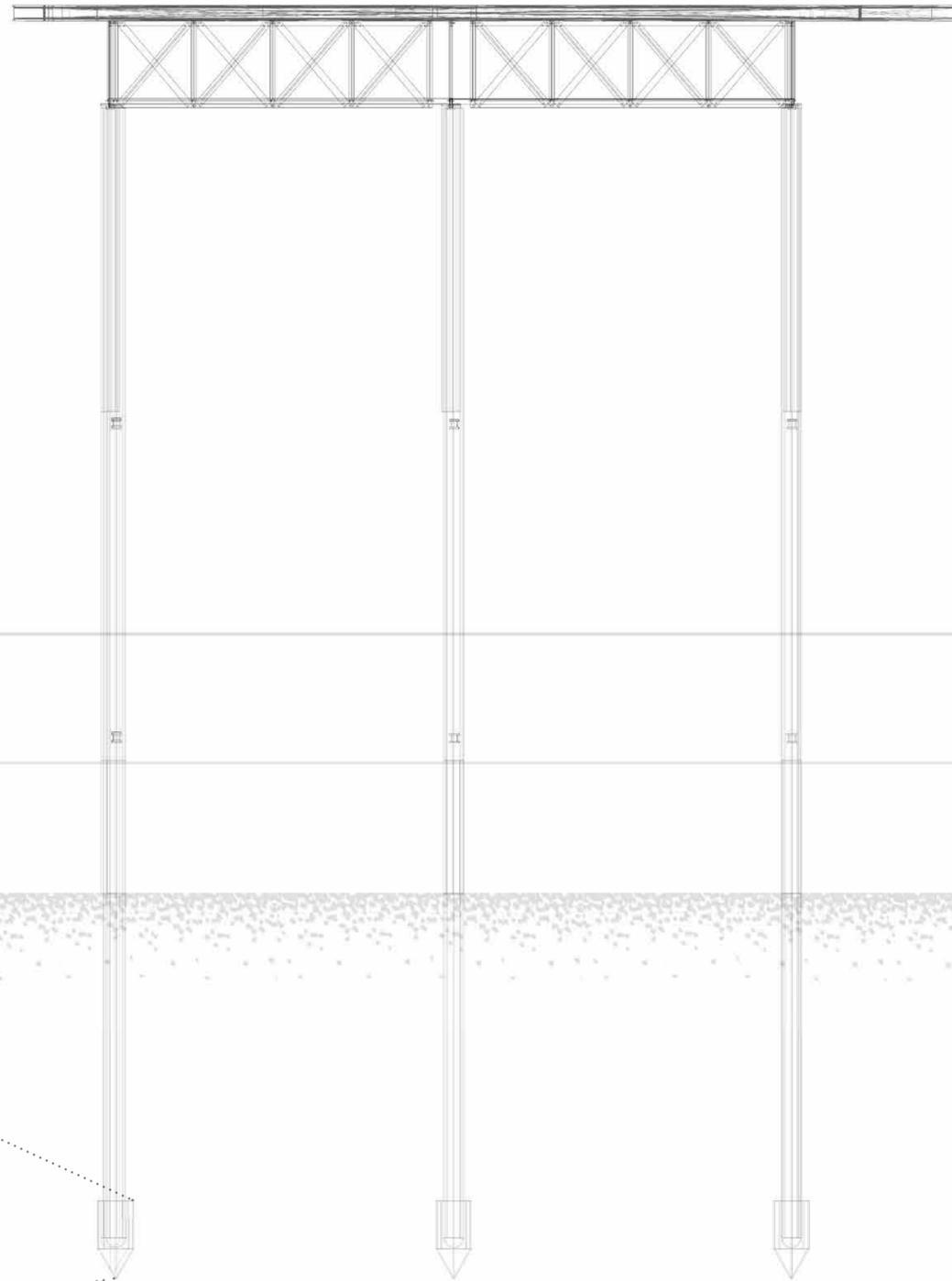
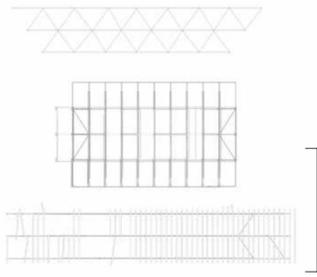
West Pier - Side Elevation

Scale: 1 - 100



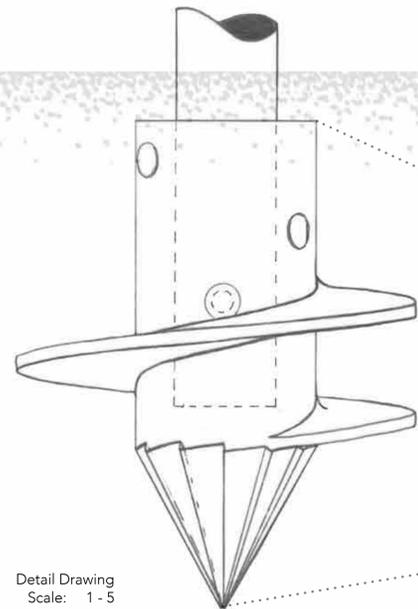
West Pier - Plan Elevation

Scale: 1 - 50



Low Tide (Highest Point)

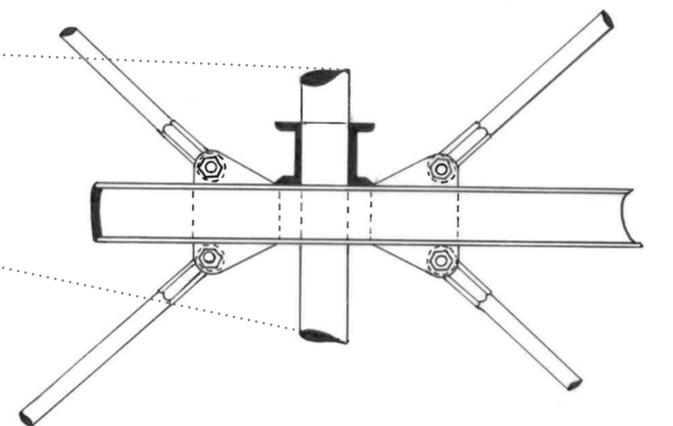
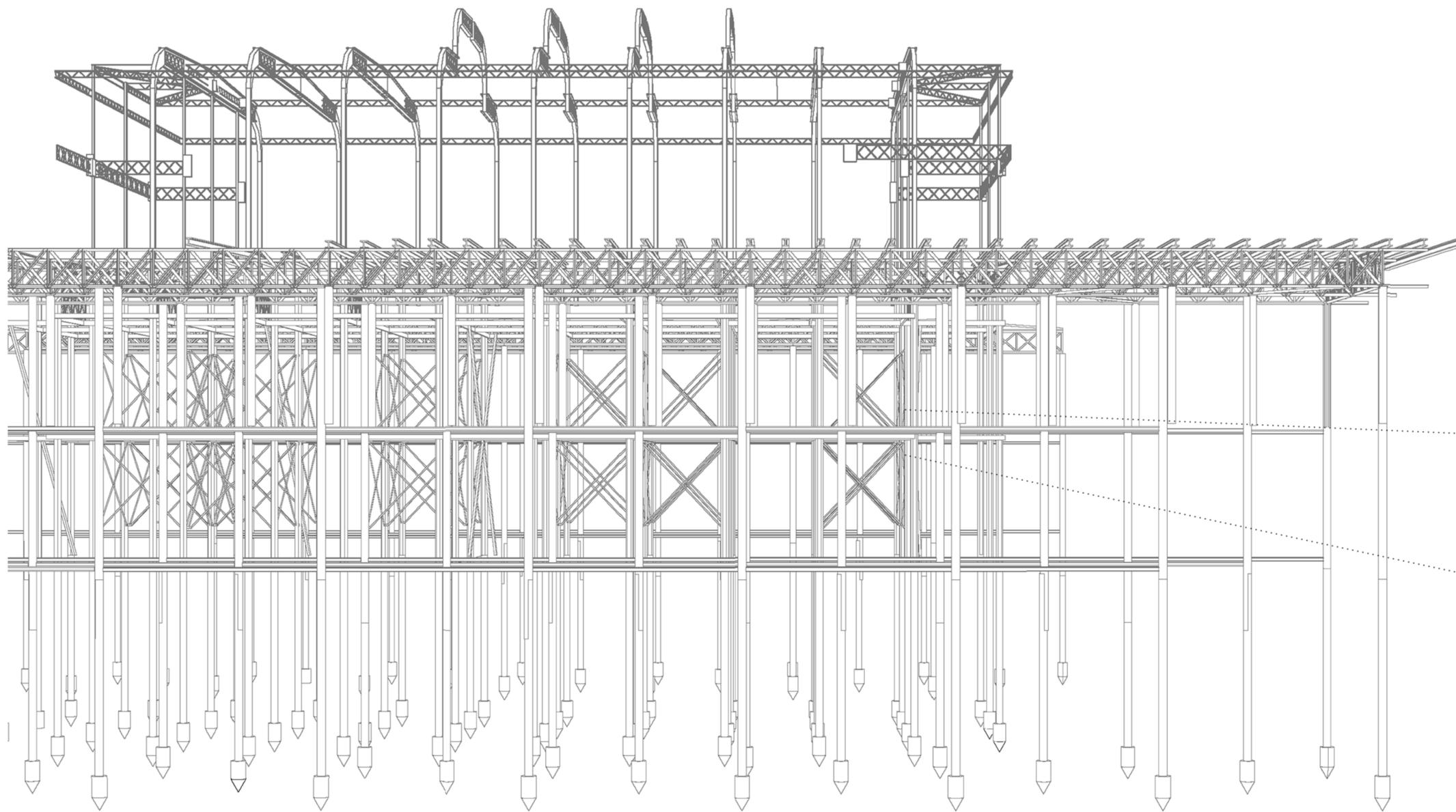
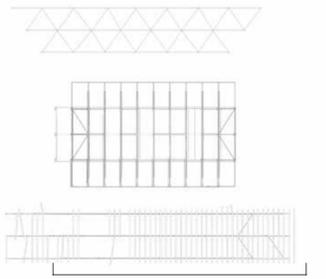
Low Tide (Average)



Detail Drawing
Scale: 1 - 5

West Pier - Cross Section

Scale: 1 - 50



West Pier - Perspective View of Structure

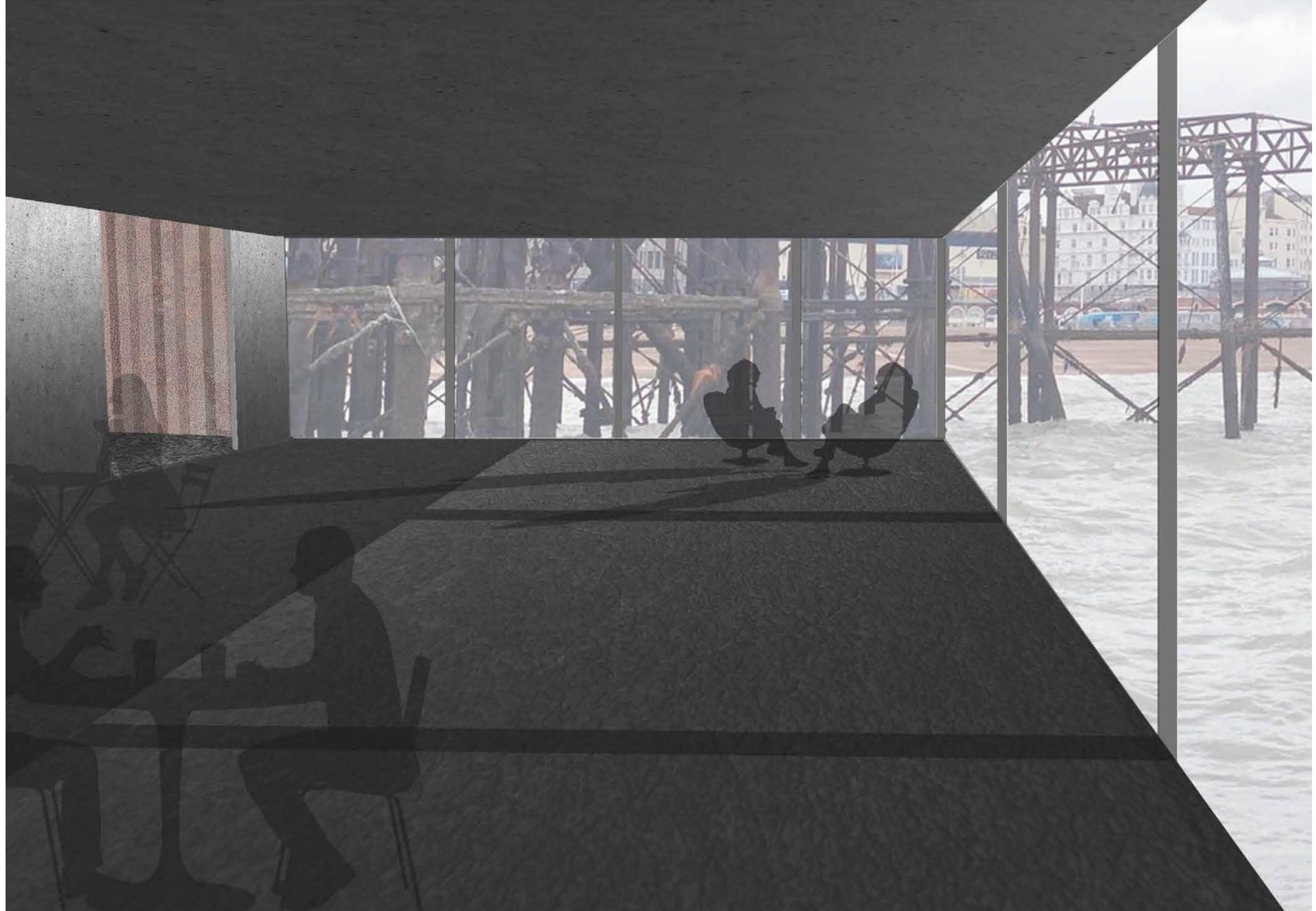
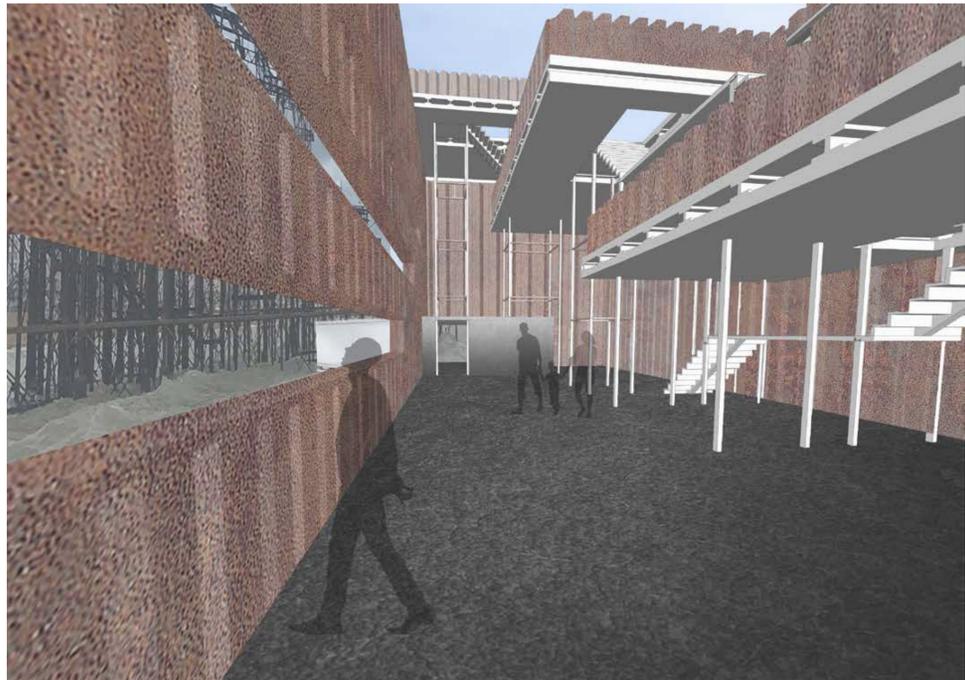
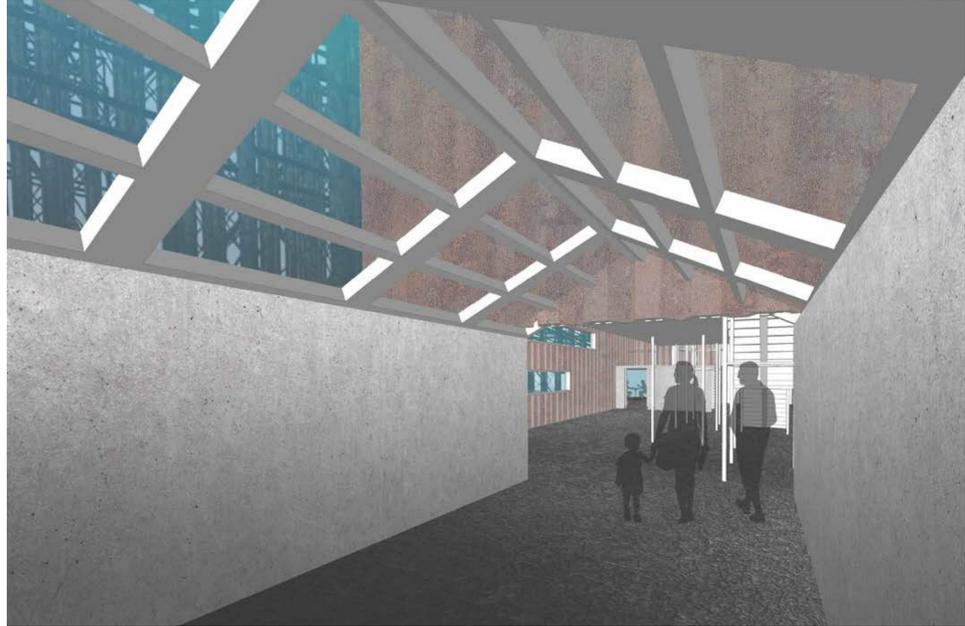
Scale: 1 - 100

Detail Drawing
Scale: 1 - 50



Initial Idea - Collage Sequence

Walking through different potential spaces...



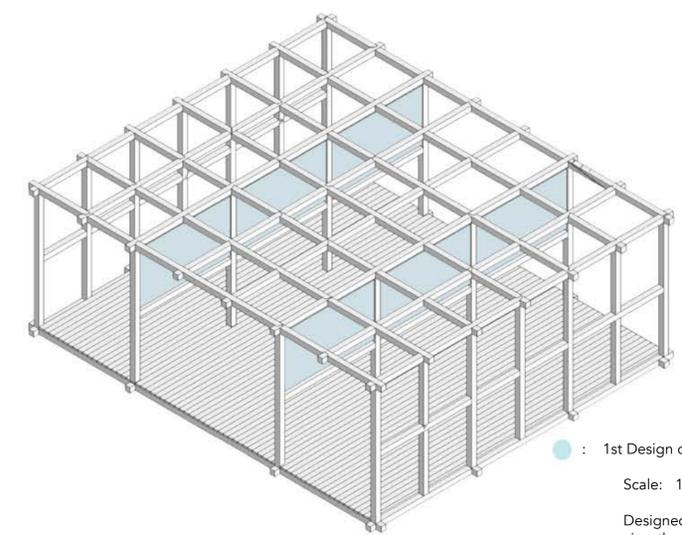
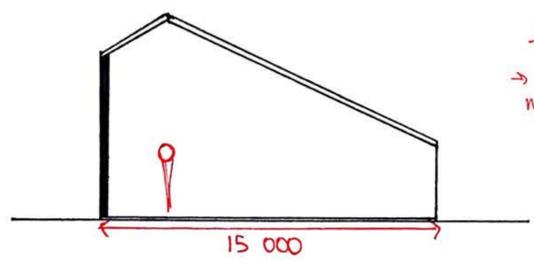
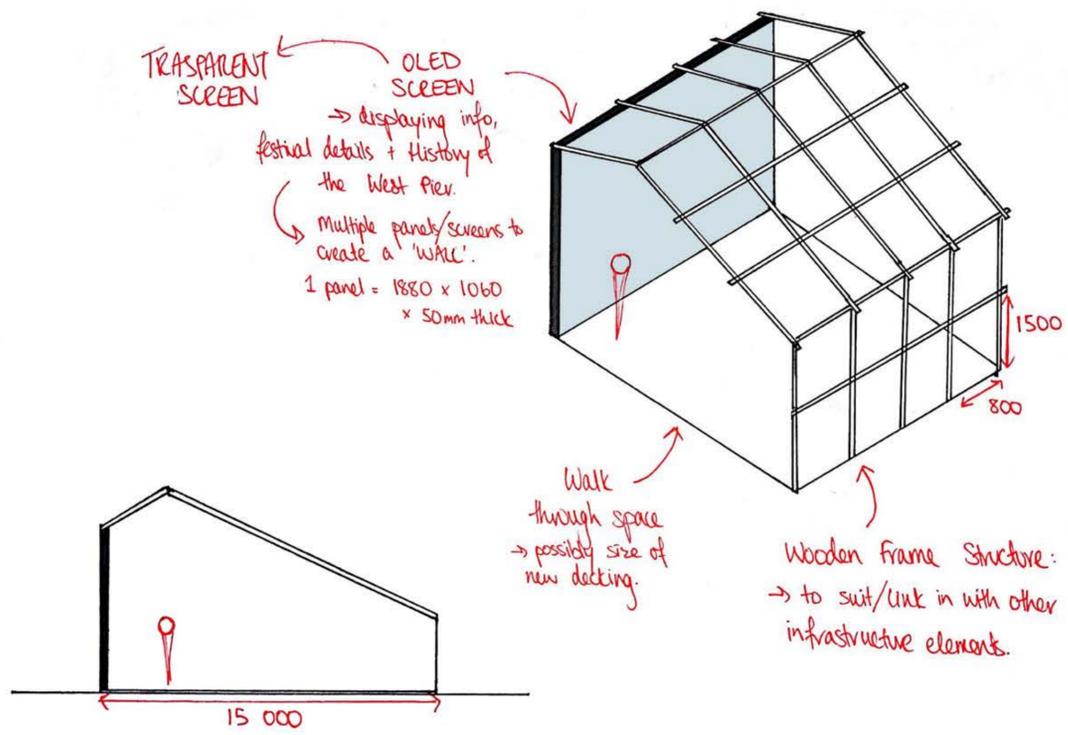
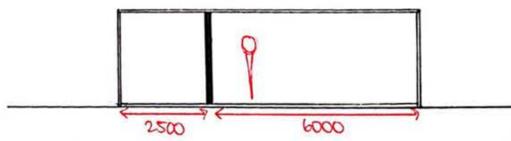
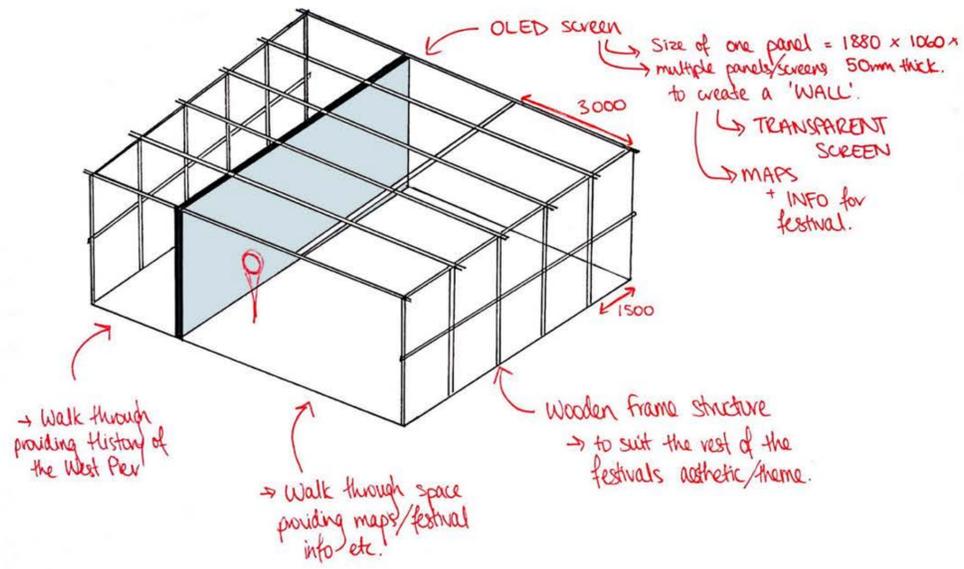
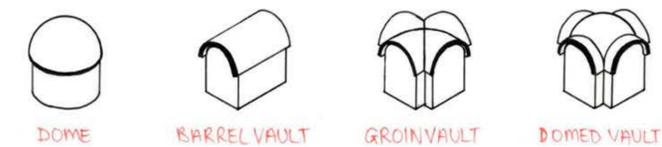
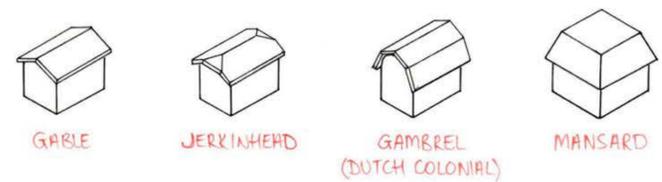
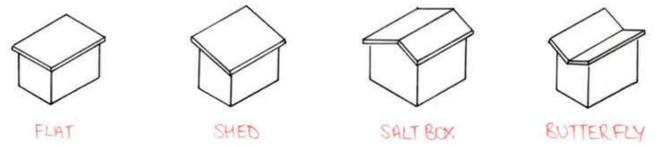
Developed Idea - Collage Sequence

Walking through different potential spaces...

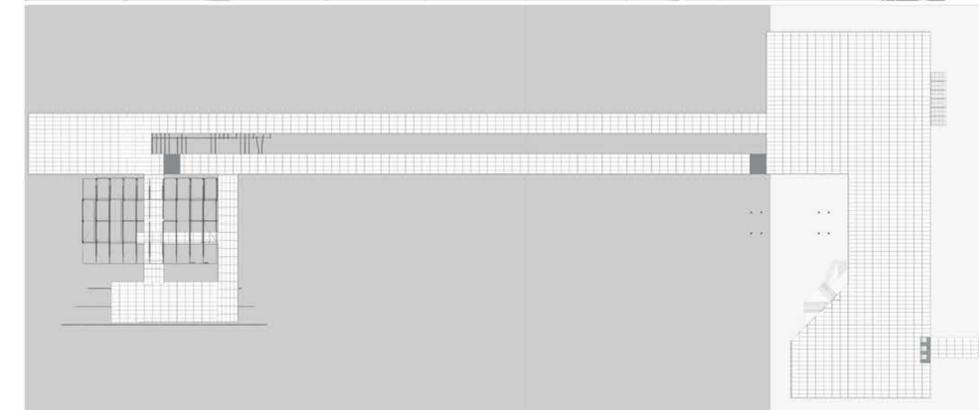
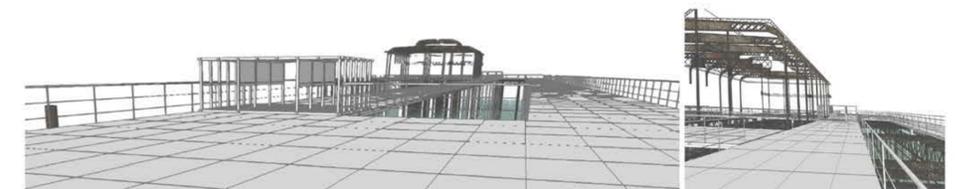


Developed Idea - Collage Sequence 02

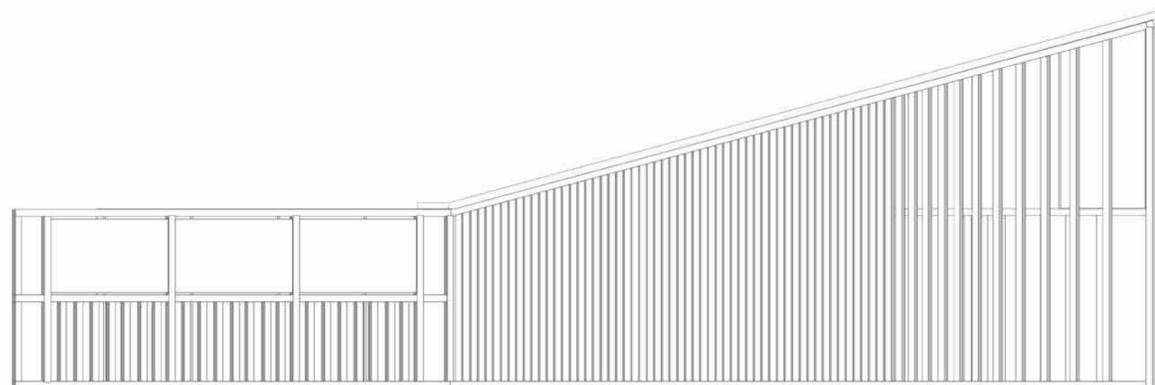
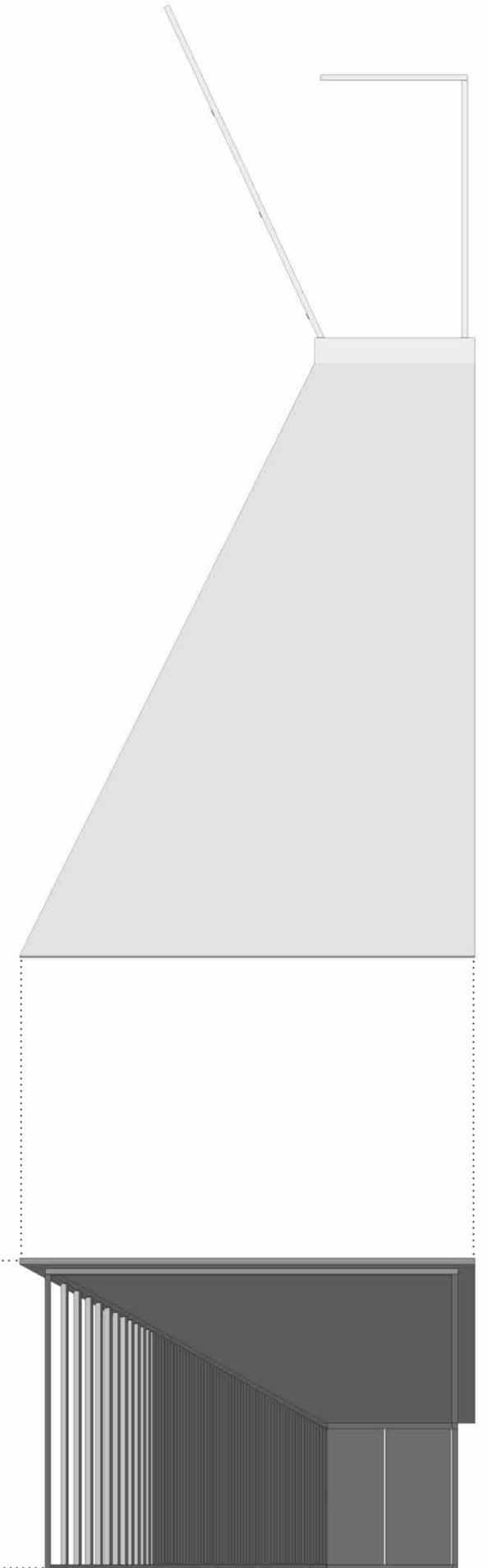
Walking through different potential spaces...



1st Design of Information Points
 Scale: 1 - 50
 Designed to allow the user to walk through and view the OLED screens. These will provide Festival Information, as well as the history of the West Pier.

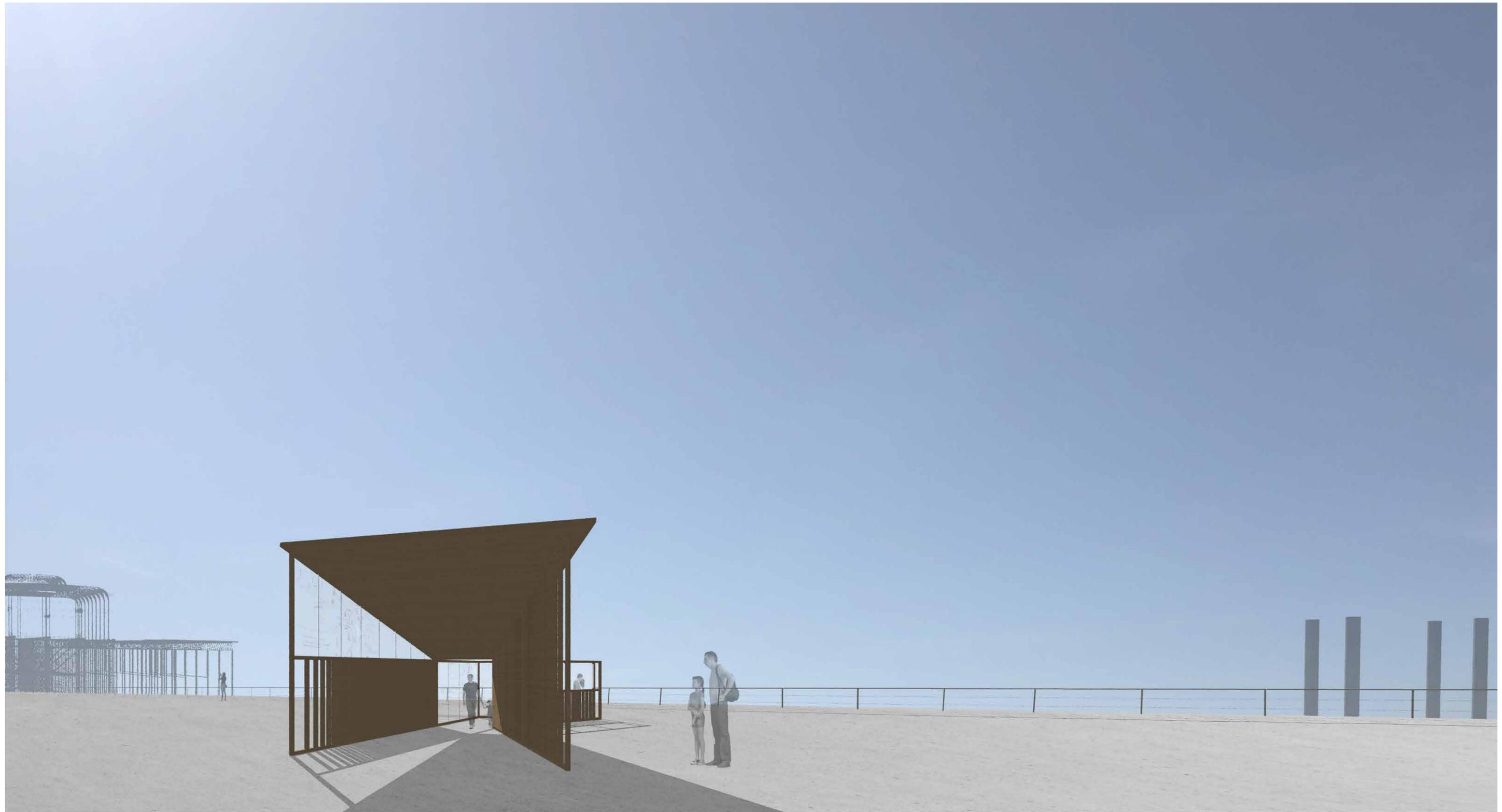


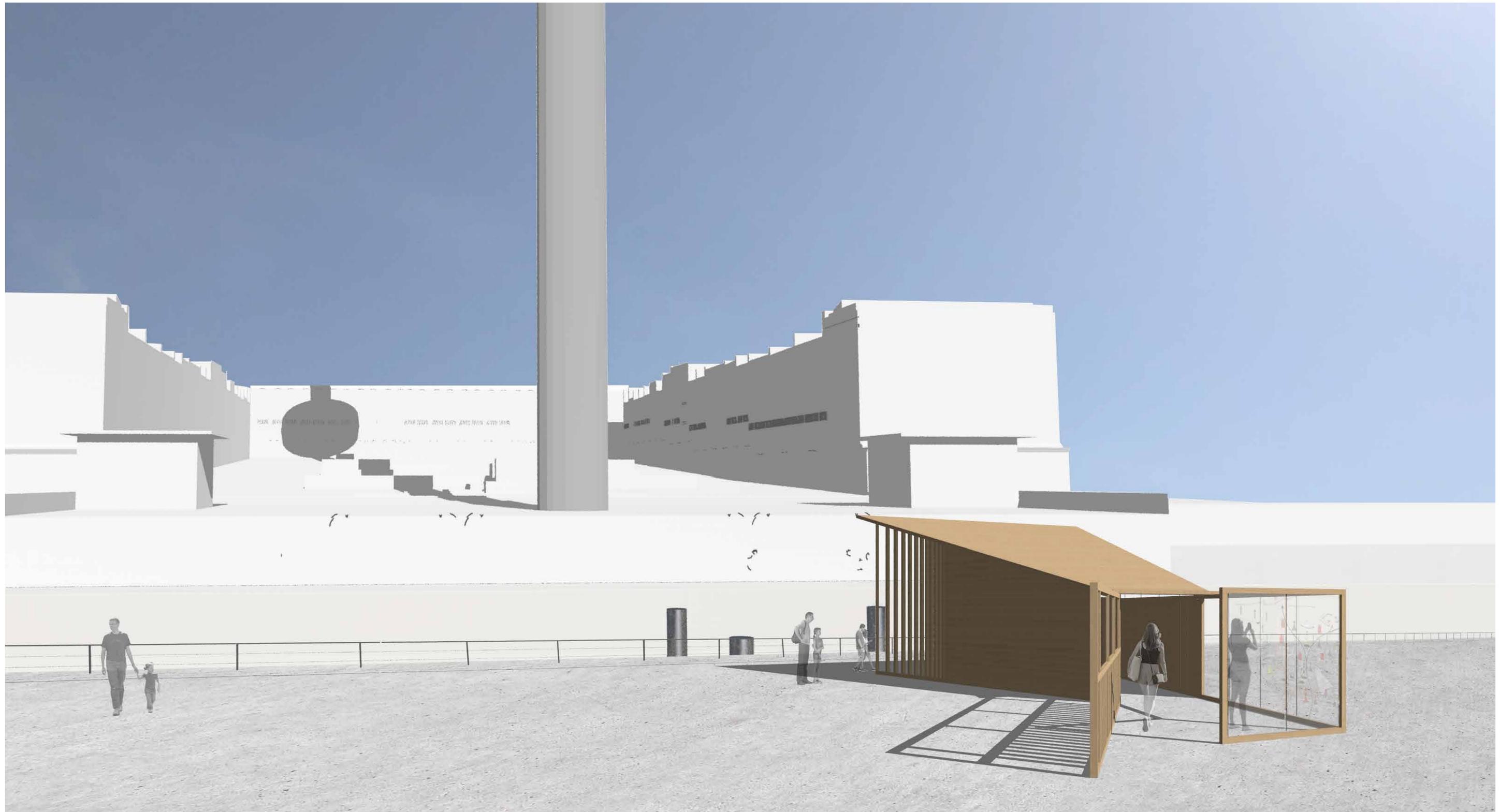
Location of 2 Information Point Structures - On Site
 (Decking created within Group A Festival)

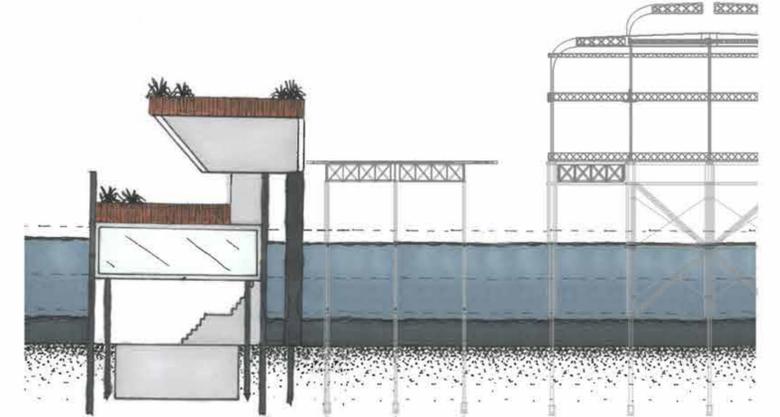
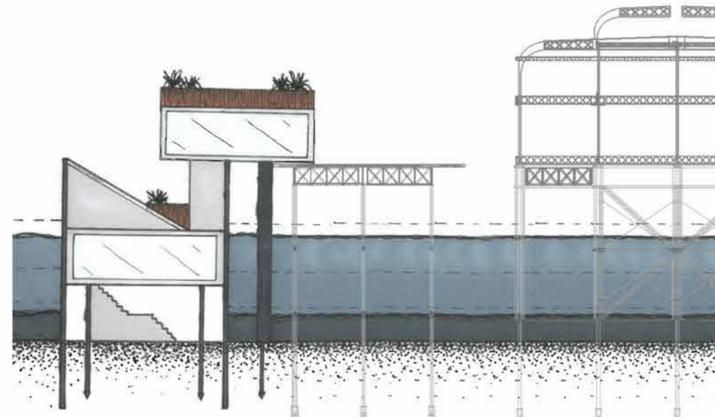
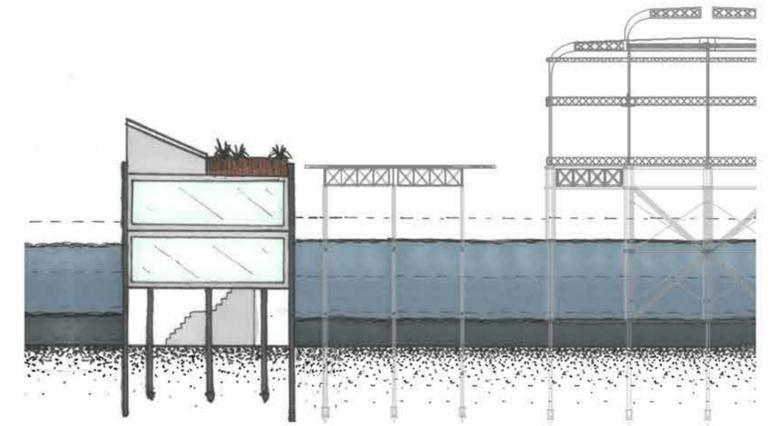
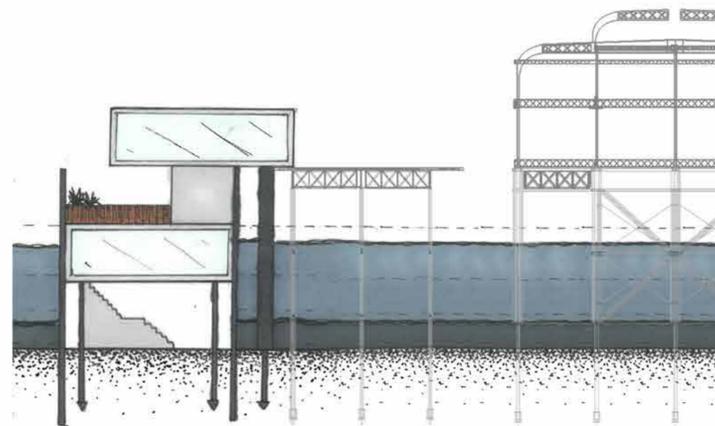
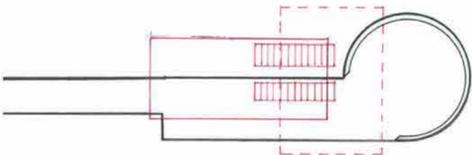
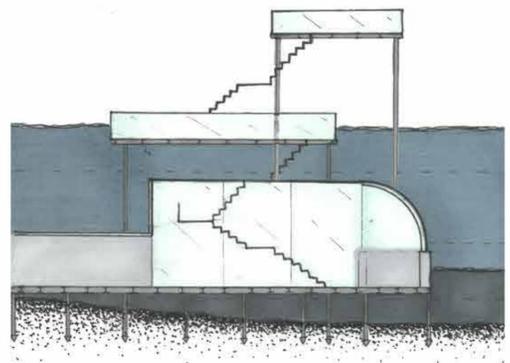
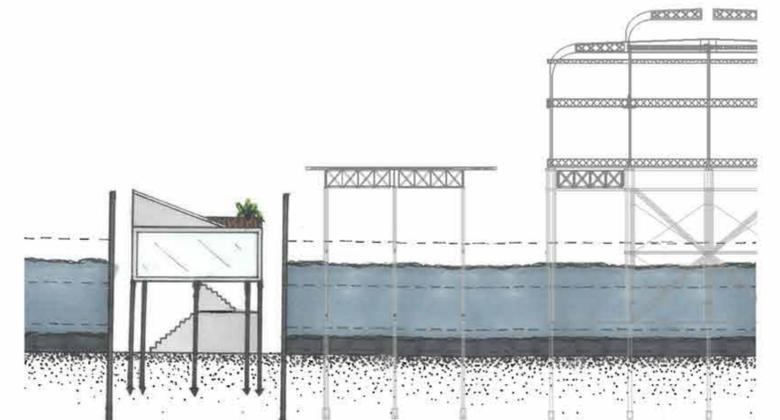
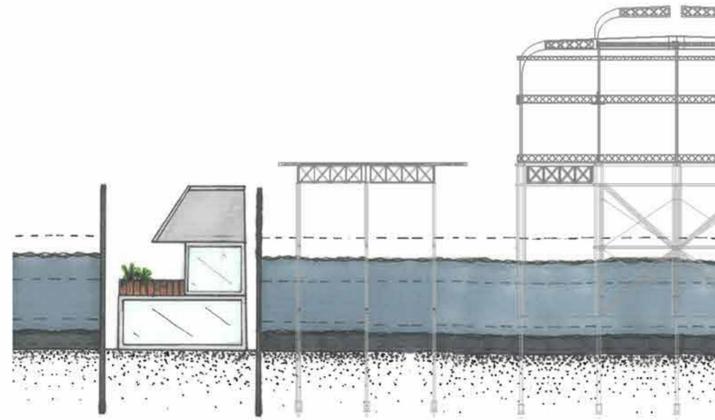
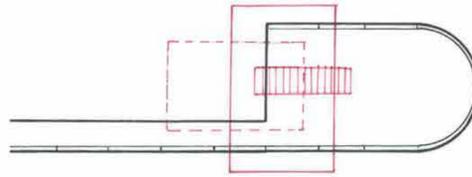
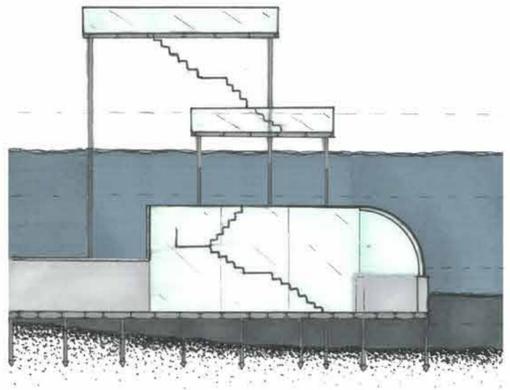
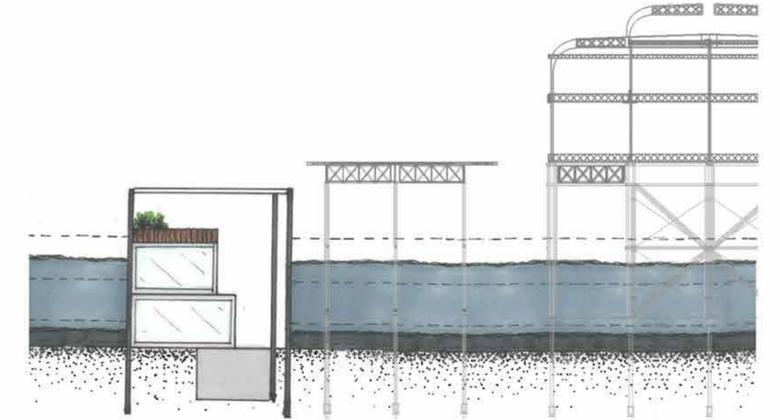
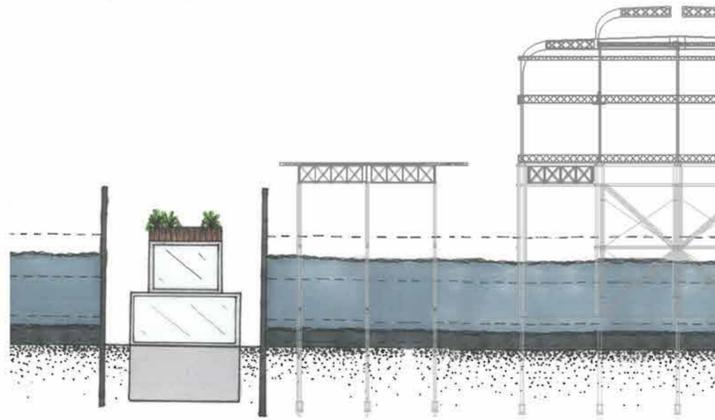
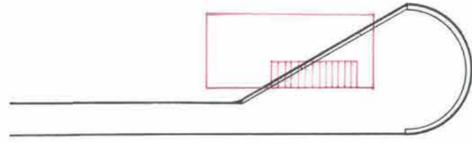
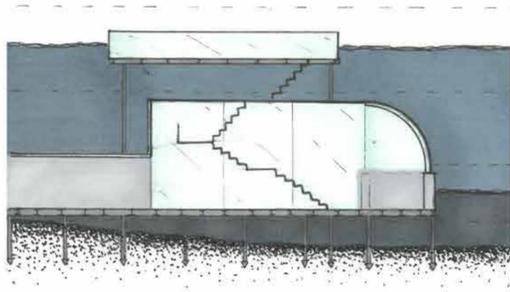
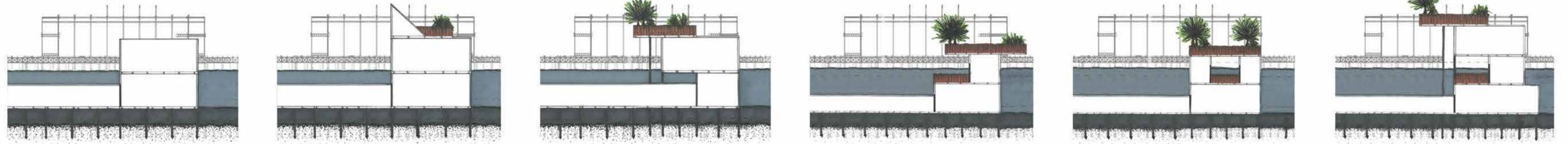


Infrastructure Final Design - Info Points

Front View, Plan View, Elevation, and Axonometric Drawing
Scale: 1 - 50



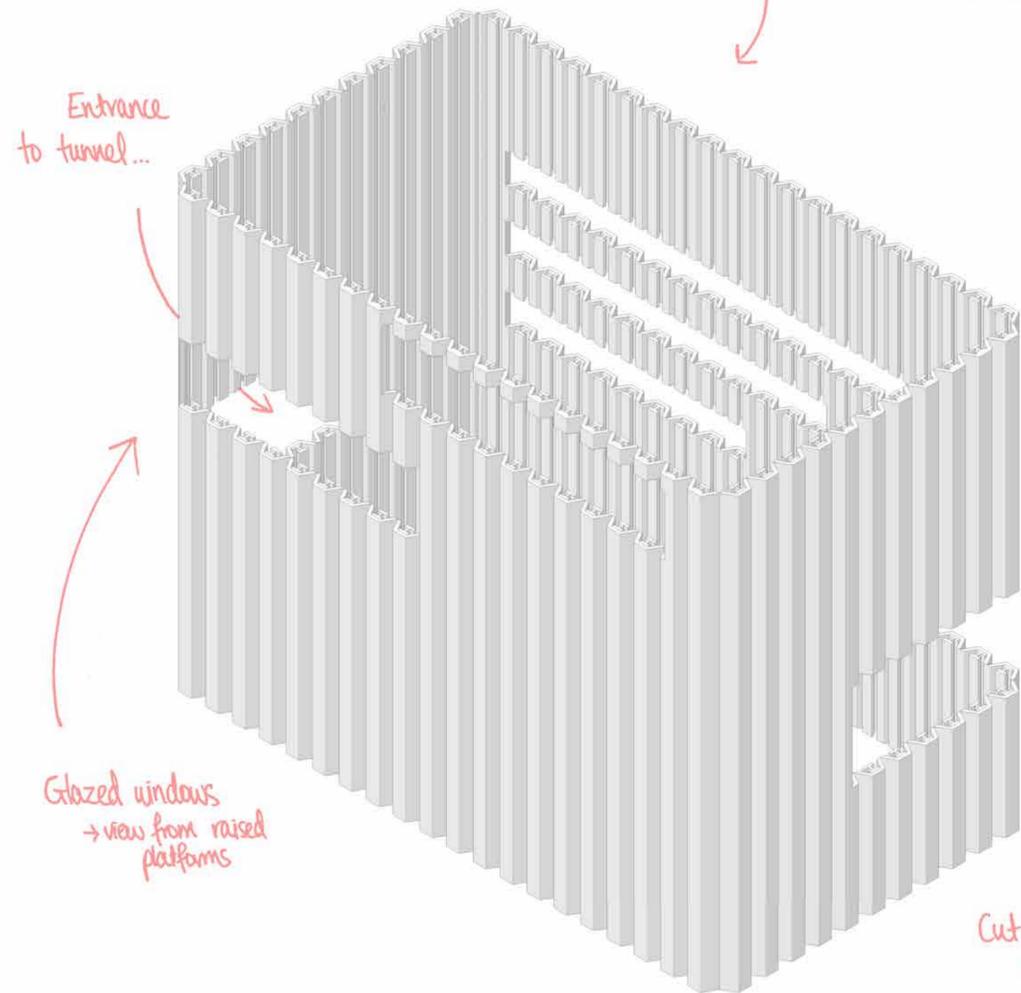




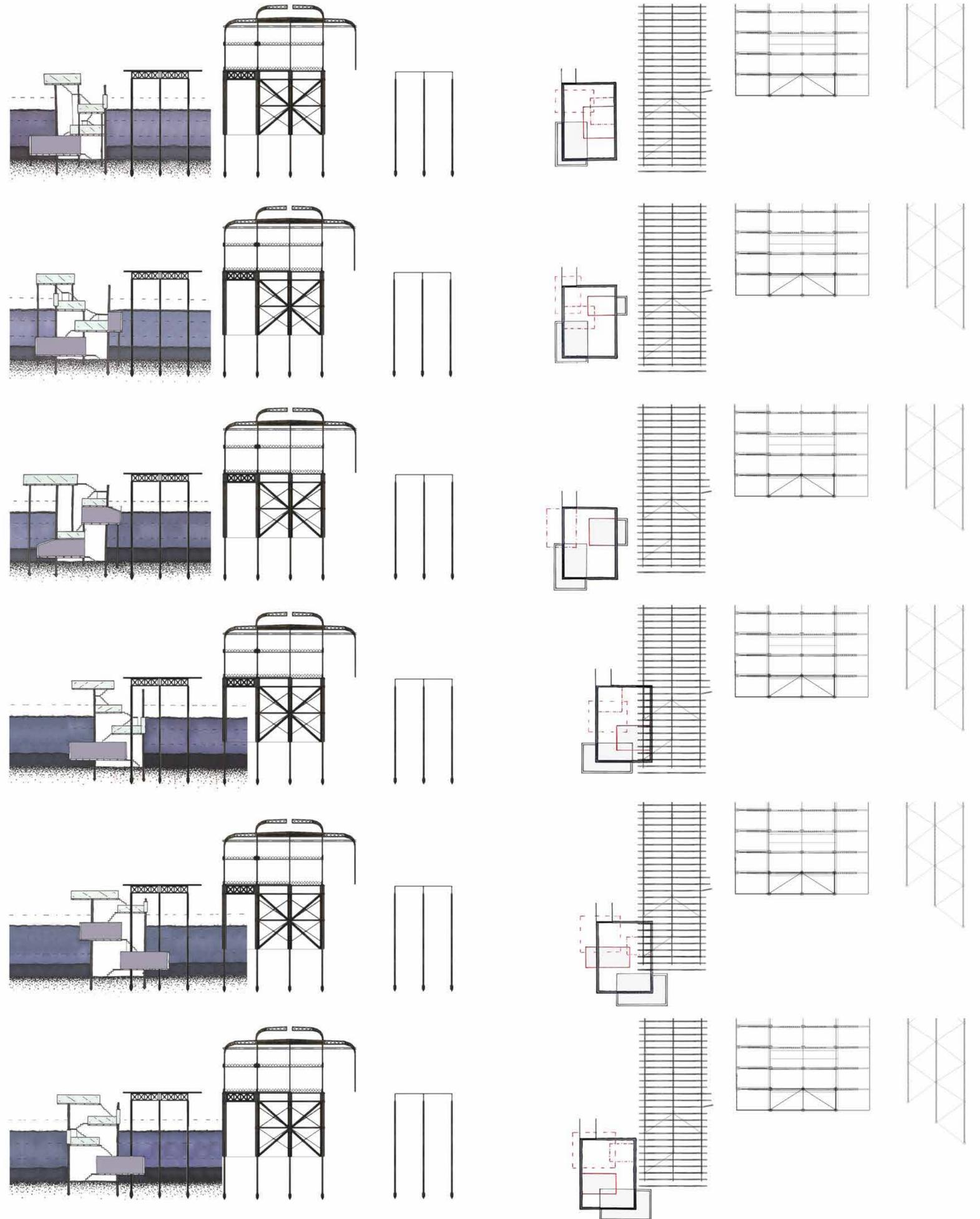
Parti Diagram 01 - Pavilion Design

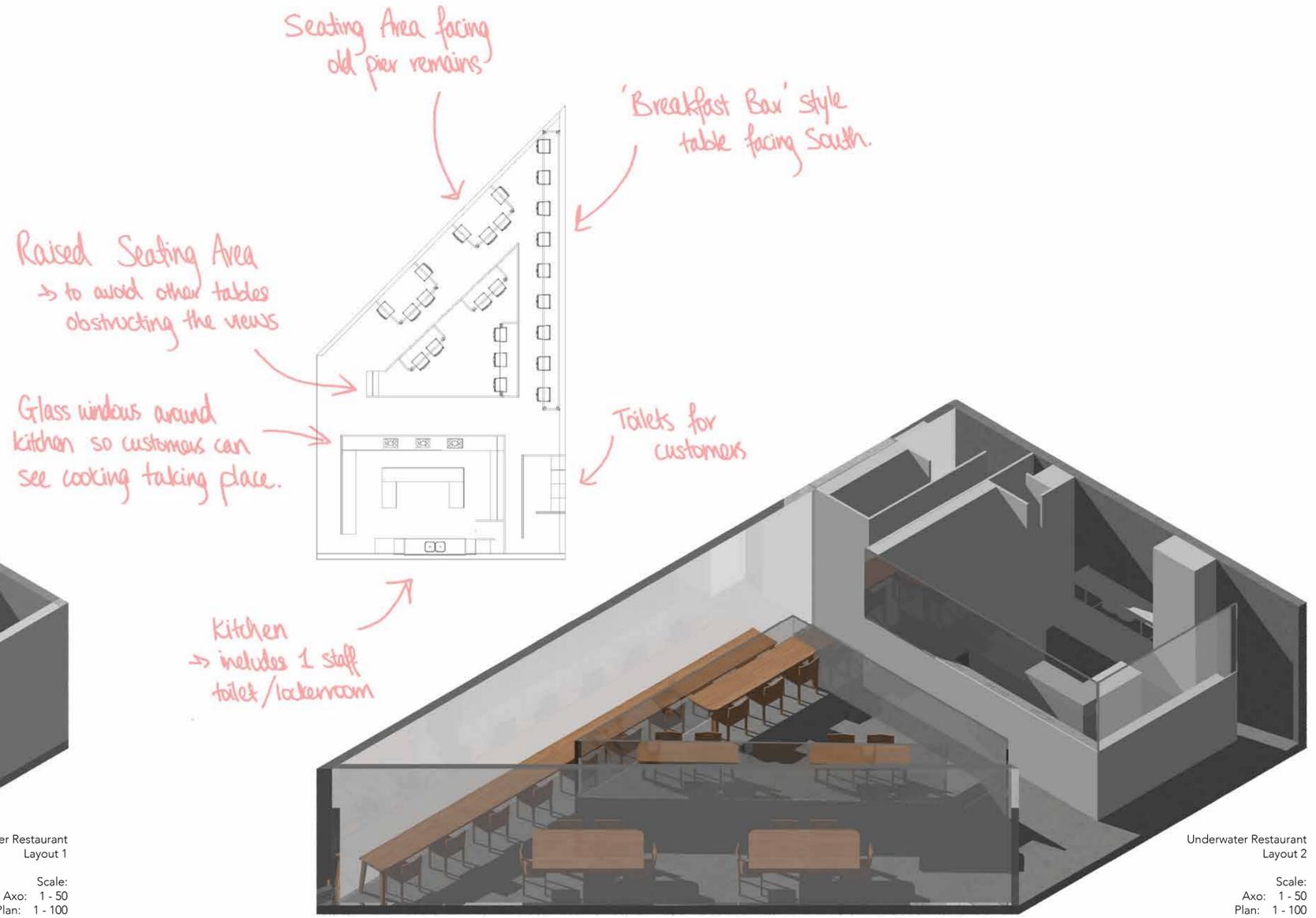
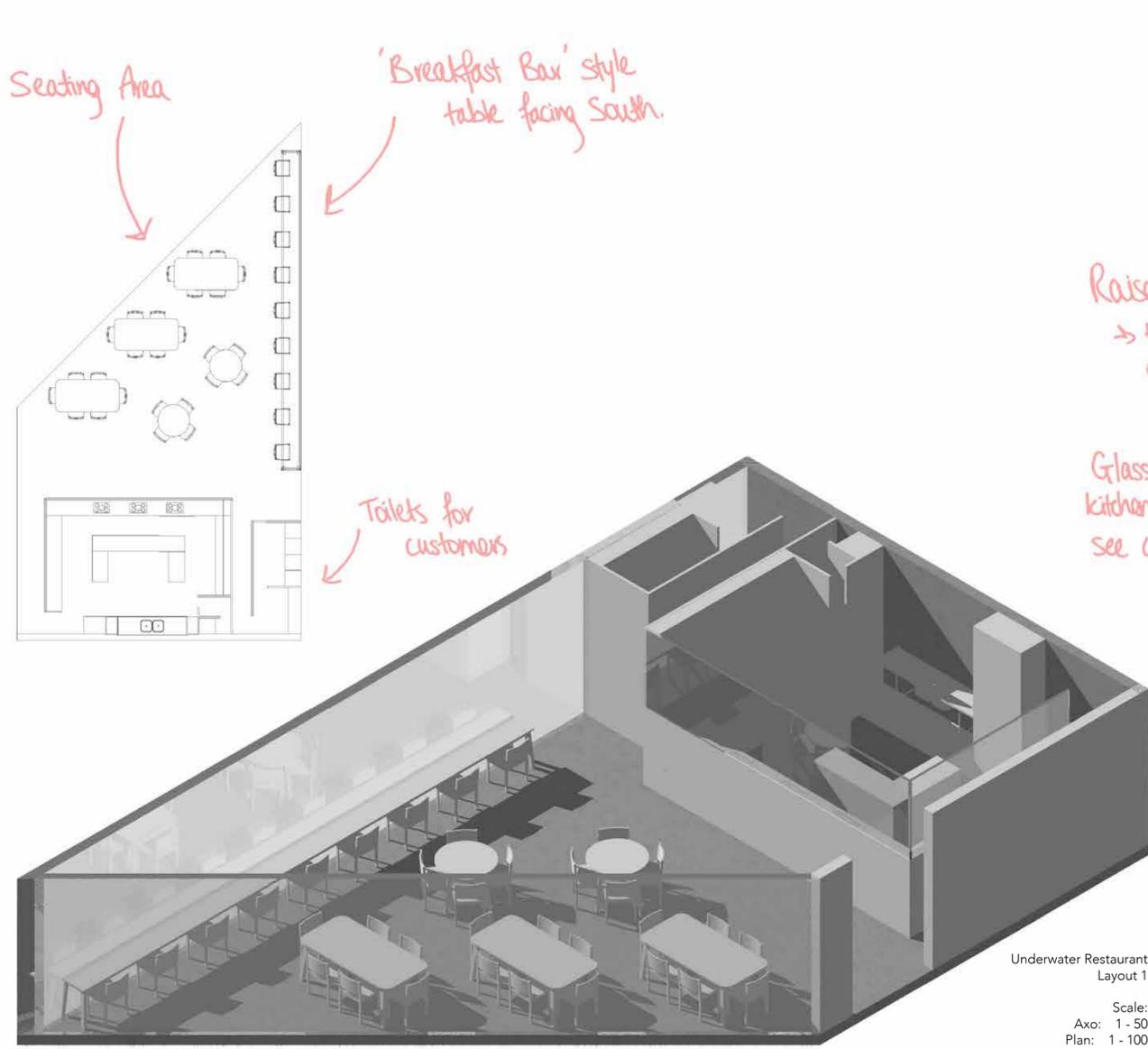
The cofferdam in these diagrams have been used as a main feature which will separate the water from the building. The developments and alterations have varied in terms of roof design, as well as building outside of the cofferdam walls, and building below the seabed. All showing how the same space could be altered or differently occupied.

The platforms in the diagram above will be accessible through the underwater tunnel and will lead to the underwater restaurant. The floating effect will also provide an illusion when viewing the structure from shore. The narrow frame holding the platforms up could be disregarded and when viewed at, the viewers' attention would be at the raised platforms and to whoever may be occupying that space at that particular point. I wanted to play around with a different shape for the ground floor. Something which would fit around the west pier at a 'comfortable' angle.



3 Glazed Windows
→ view old West Pier structure remains.

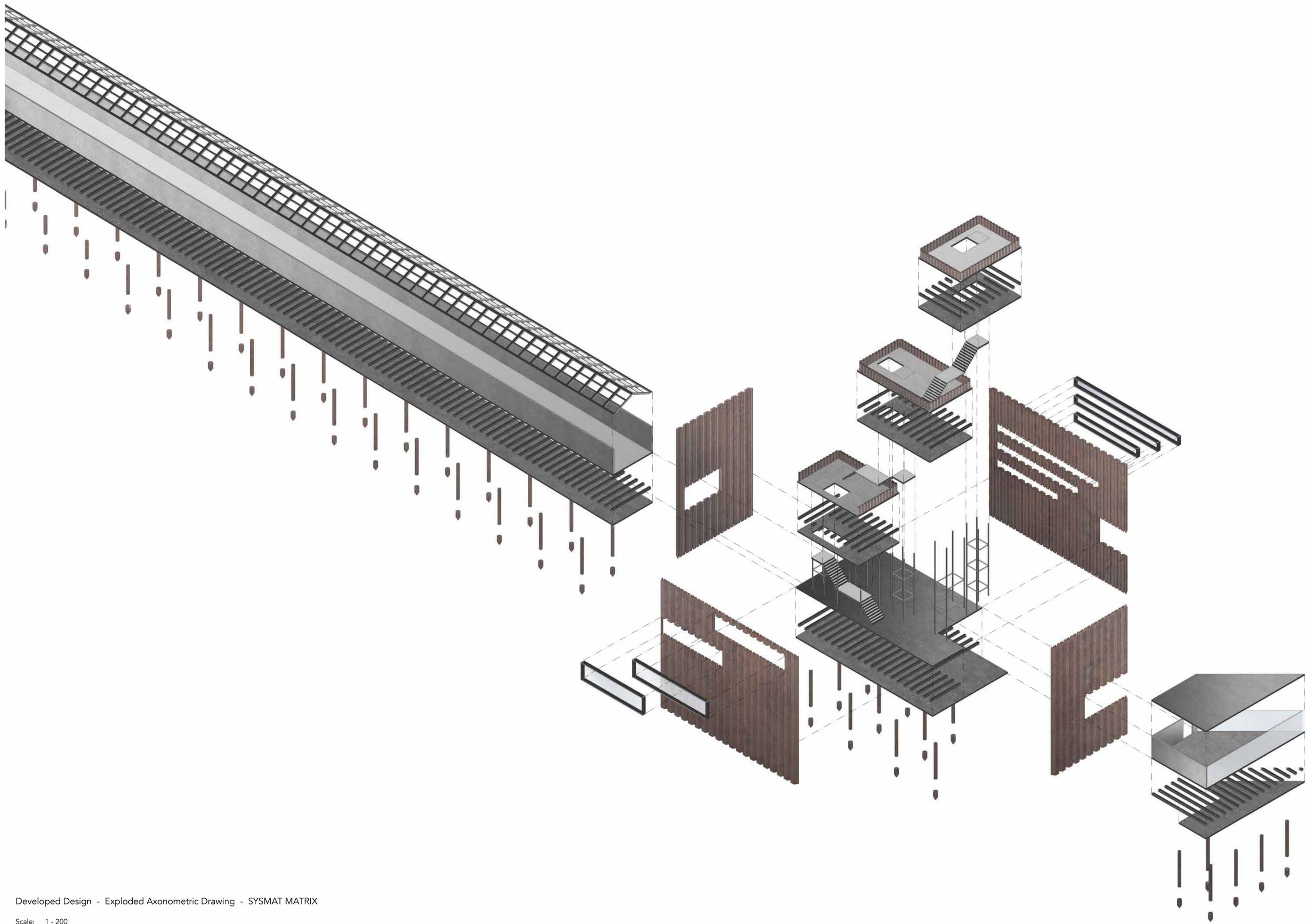


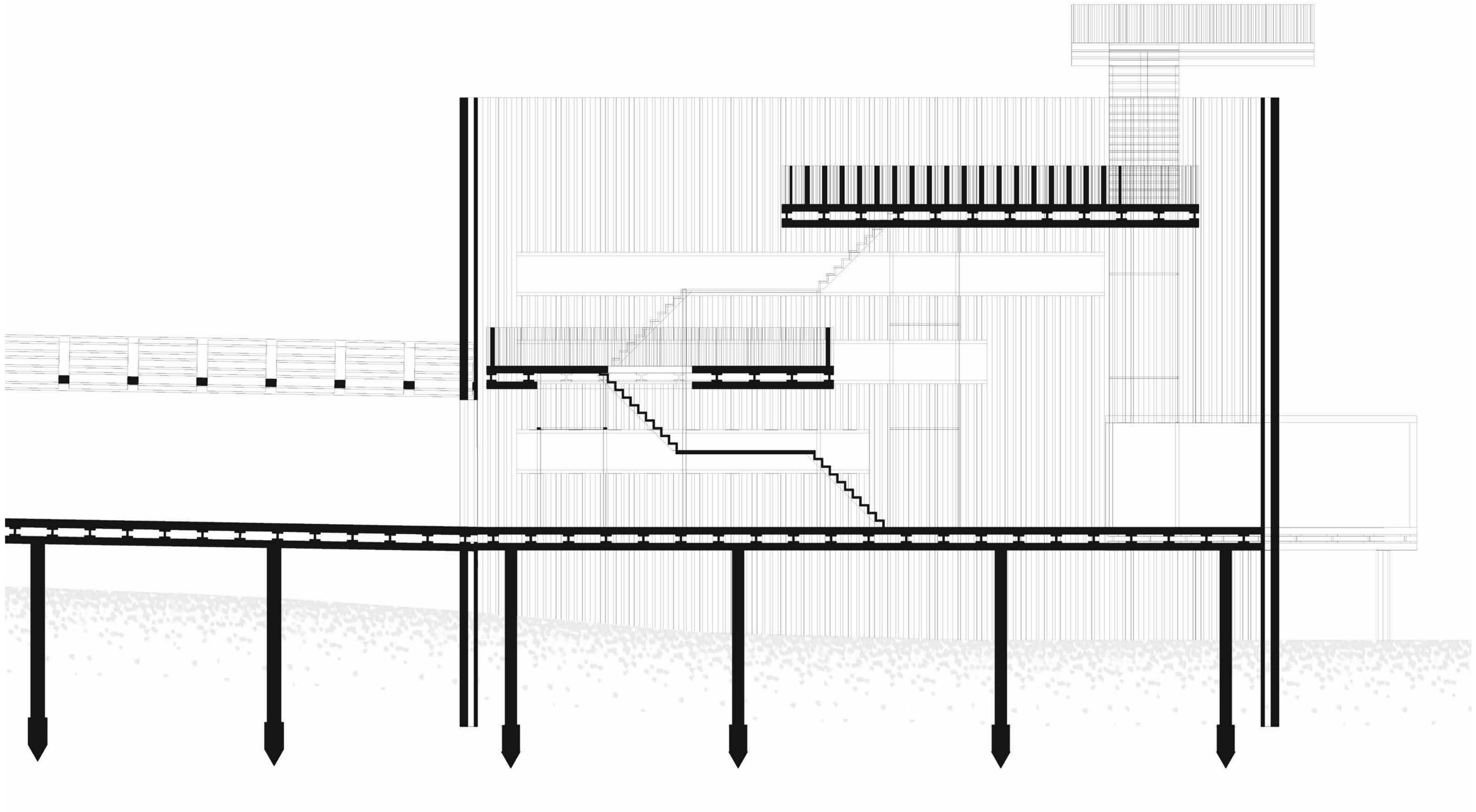
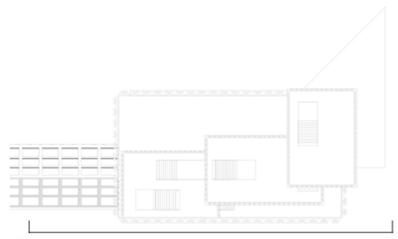


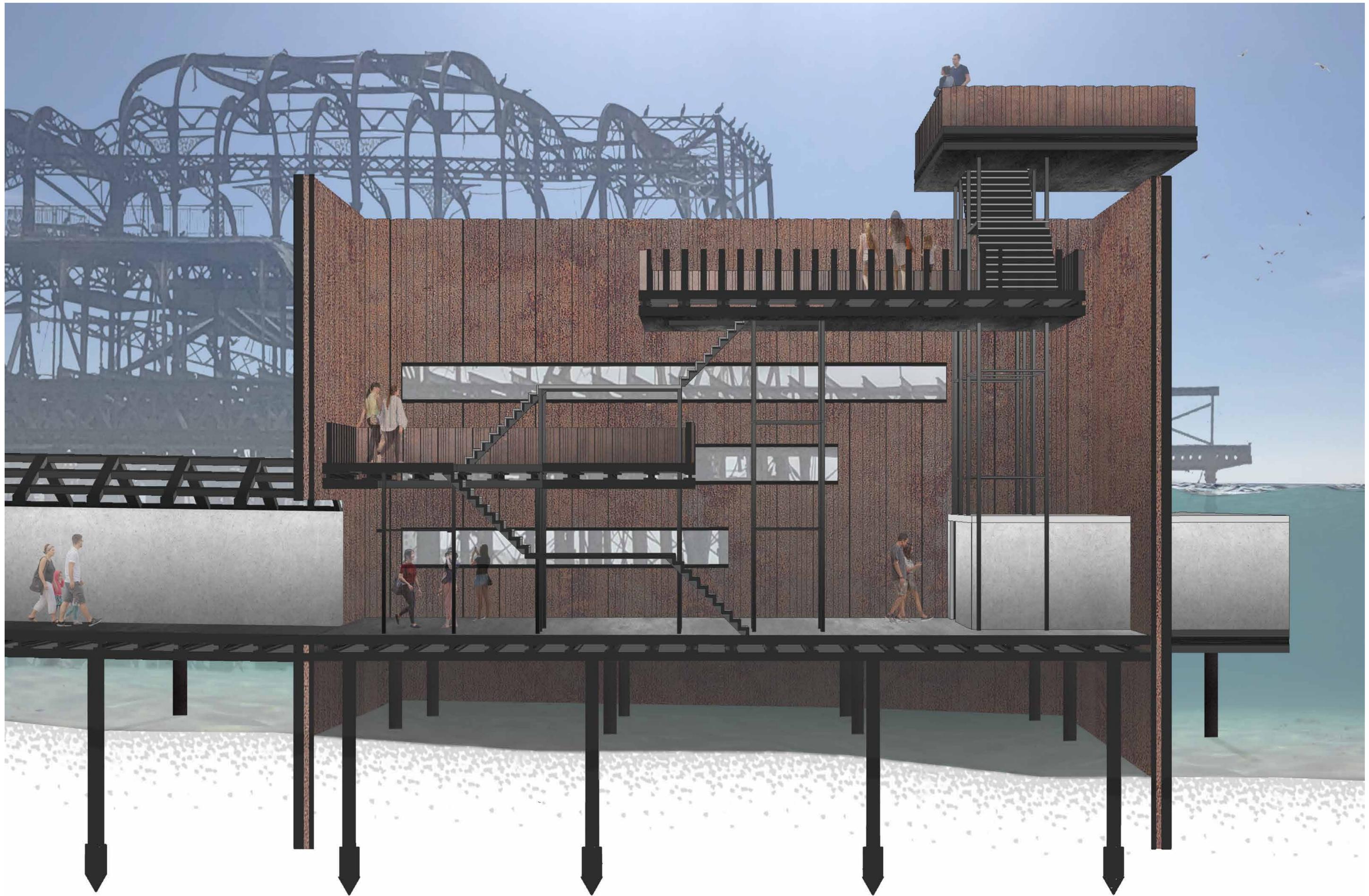
Development of Interior Spaces - Underwater Restaurant

The Underwater Restaurant is the main feature within this pavilion; therefore, the layout is extremely important. The diagrams above show how the space has developed to allow the best view for the people occupying it. The seats have been arranged in way which will enable a particular viewpoint from every table. As the platform in the middle is raised, it will avoid obstructing any views. At high tide this particular area will become submerged, and at low tide, the remains of the West Pier will be visible.

Simple Visuals displaying experience walking and seating within Layout 2

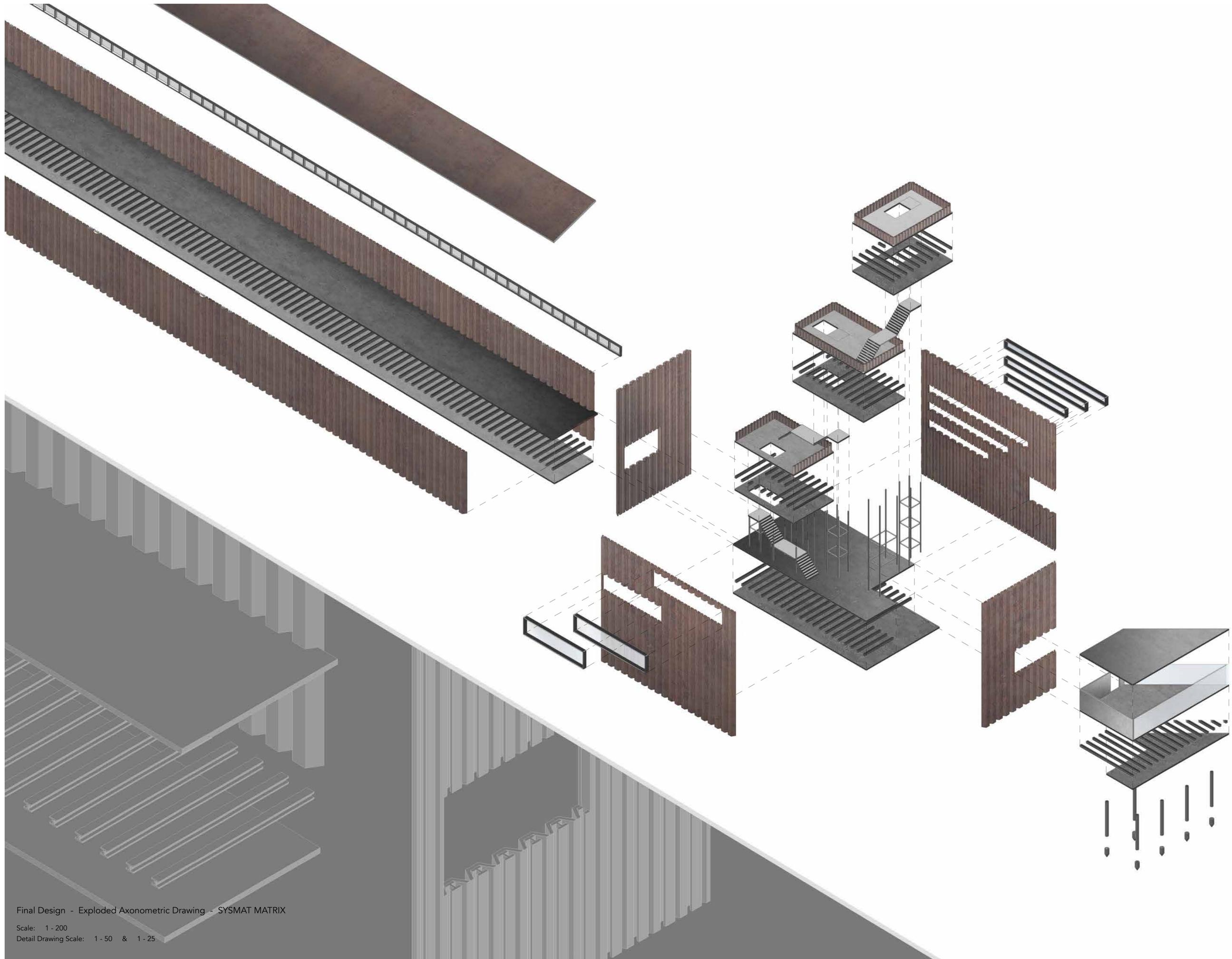




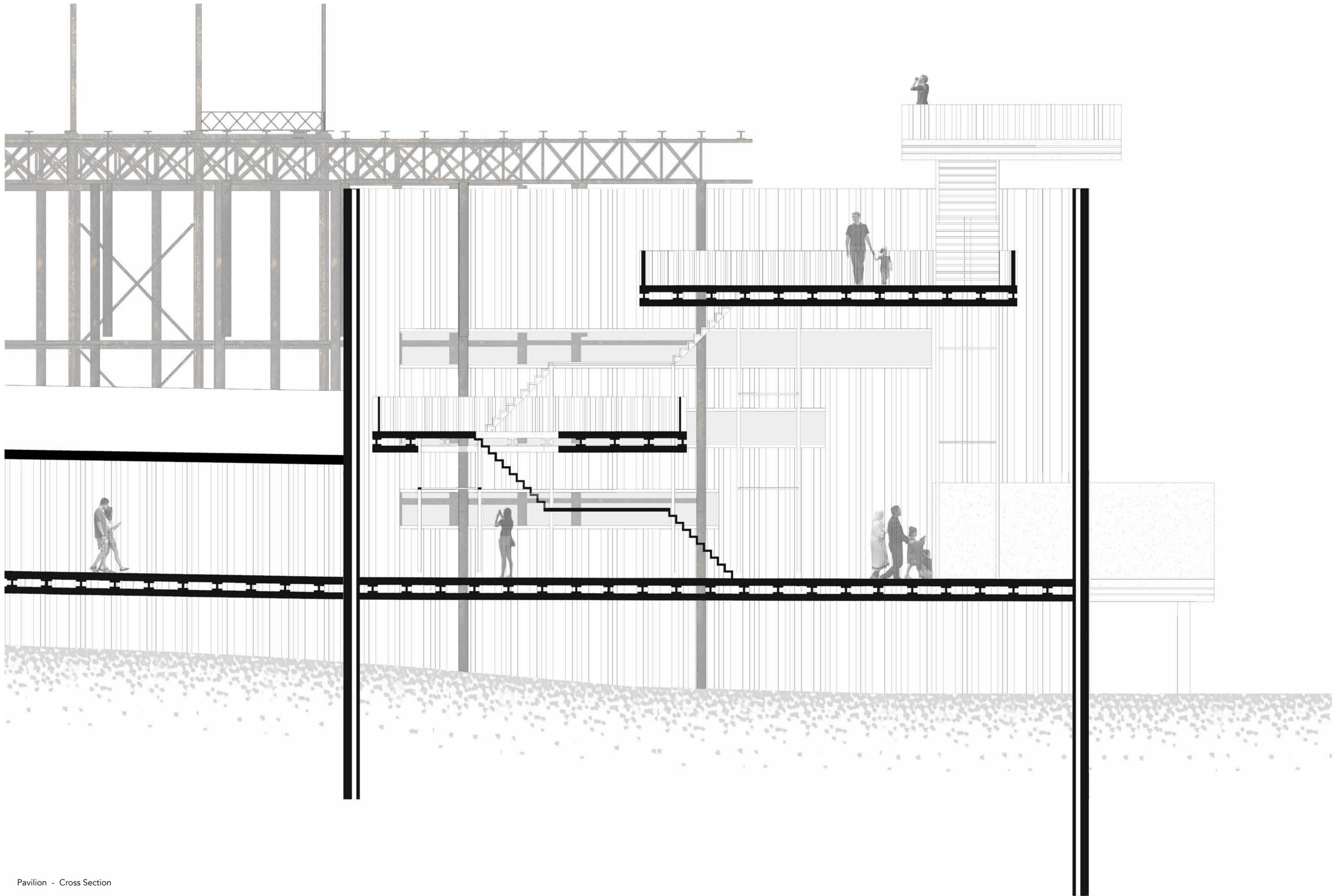


Developed Design - Perspective Section

Scale: 1 - 50

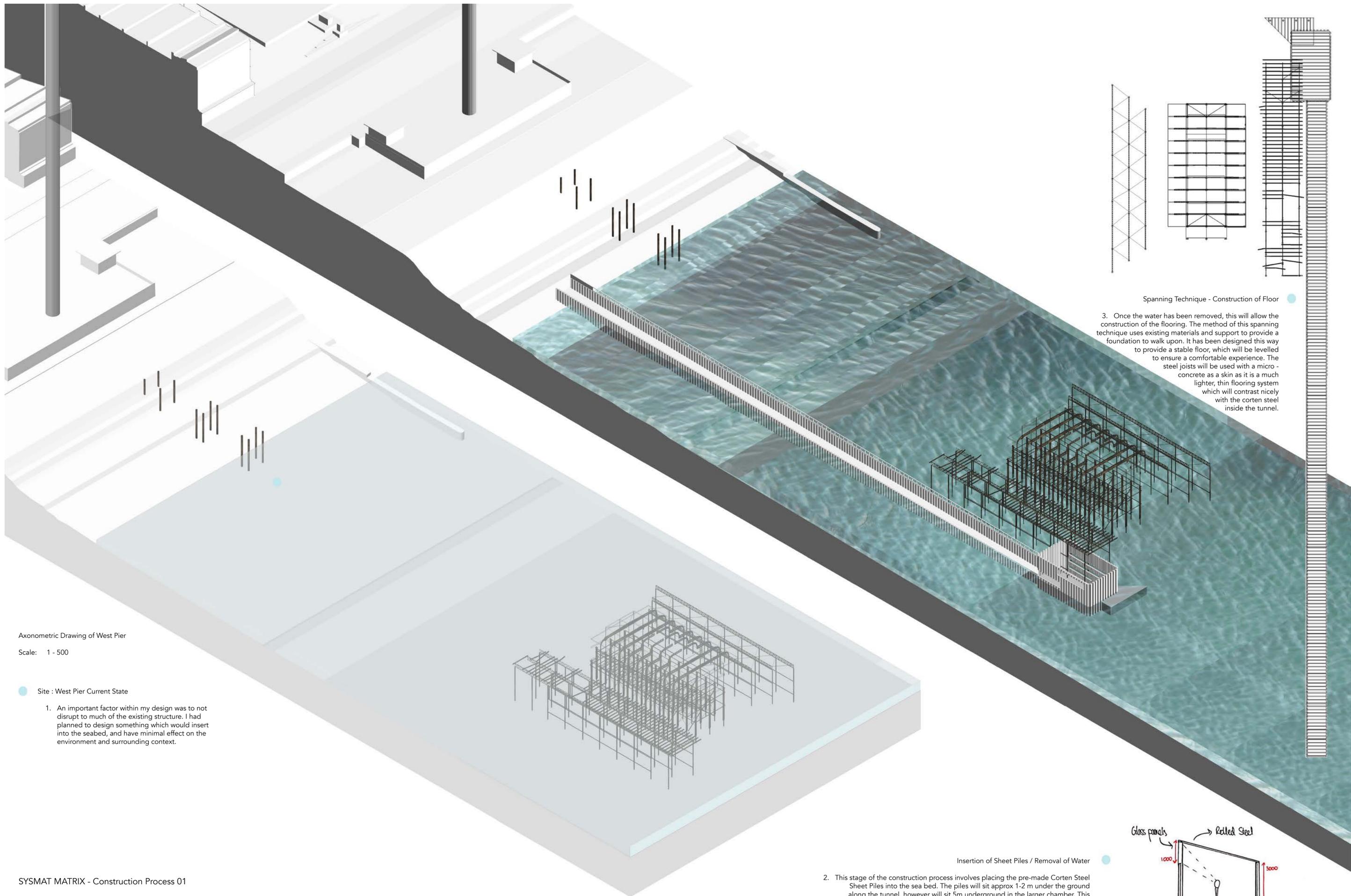


Final Design - Exploded Axonometric Drawing - SYSMAT MATRIX
Scale: 1 - 200
Detail Drawing Scale: 1 - 50 & 1 - 25



Pavilion - Cross Section

Scale: 1 - 50



Axonometric Drawing of West Pier

Scale: 1 - 500

Site : West Pier Current State

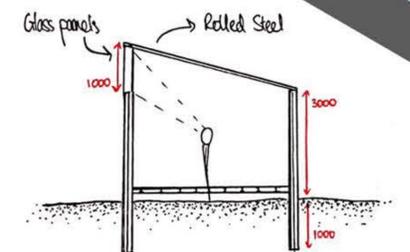
1. An important factor within my design was to not disrupt to much of the existing structure. I had planned to design something which would insert into the seabed, and have minimal effect on the environment and surrounding context.

Spanning Technique - Construction of Floor

3. Once the water has been removed, this will allow the construction of the flooring. The method of this spanning technique uses existing materials and support to provide a foundation to walk upon. It has been designed this way to provide a stable floor, which will be levelled to ensure a comfortable experience. The steel joists will be used with a micro-concrete as a skin as it is a much lighter, thin flooring system which will contrast nicely with the corten steel inside the tunnel.

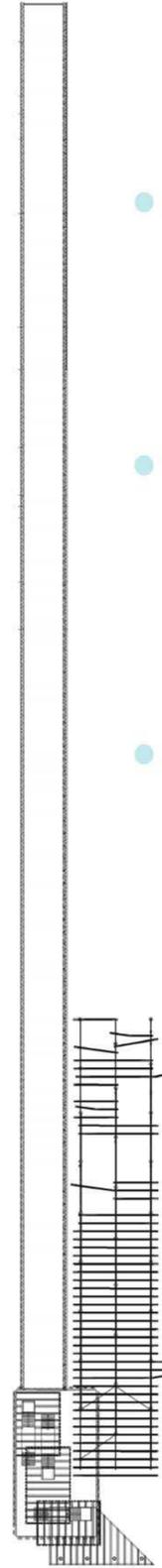
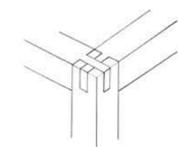
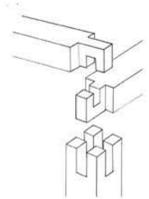
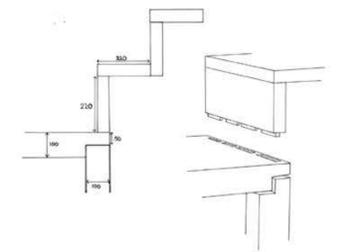
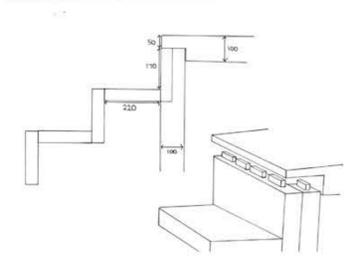
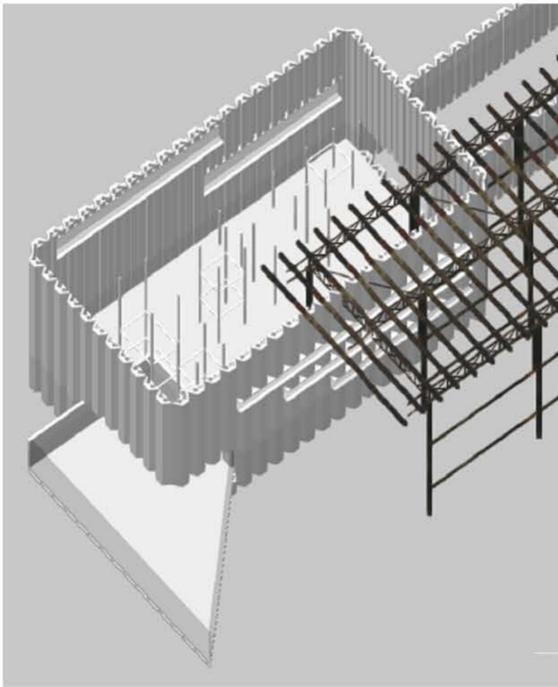
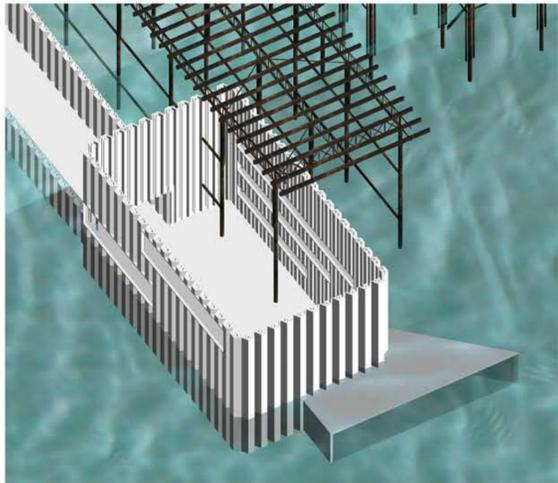
Insertion of Sheet Piles / Removal of Water

2. This stage of the construction process involves placing the pre-made Corten Steel Sheet Piles into the sea bed. The piles will sit approx 1-2 m under the ground along the tunnel, however will sit 5m underground in the larger chamber. This will allow more support and frame for the platforms within this space. The water will be removed from within this structure, therefore creating a dry space to build / construct further.



SYSMAT MATRIX - Construction Process 01

Displaying the construction process in detail, showing how this particular structure is assembled.



● Skin - Material Palette

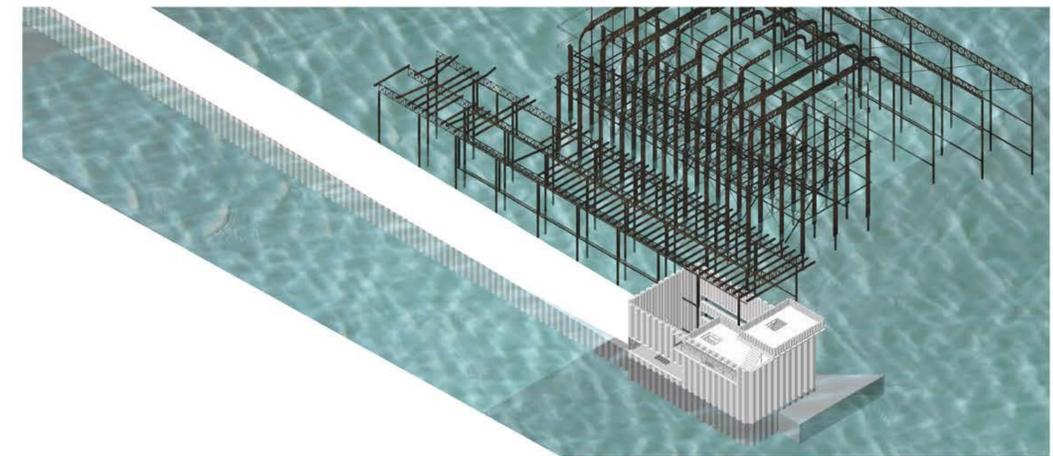
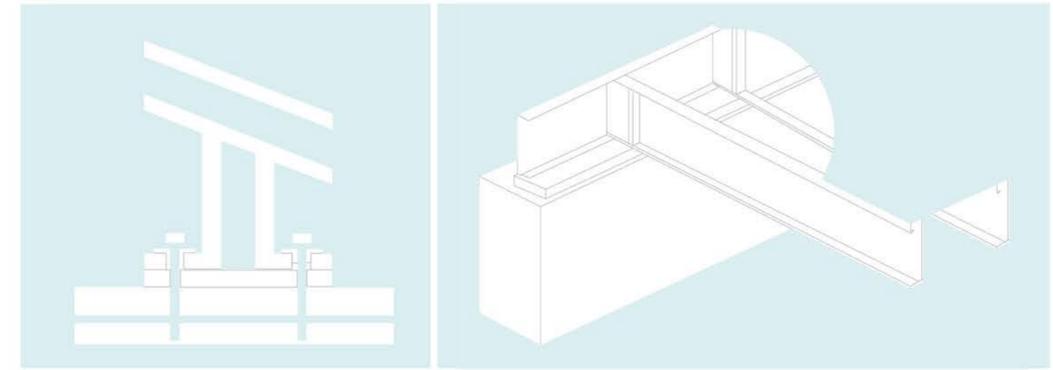
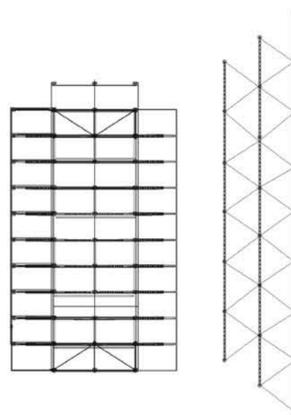
4. The next phase of the construction process will be to skin the current interior spaces. I plan to use micro - concrete to cover the steel joists, and to create a contrast with the surrounding materials. Although concrete doesn't give off a temporary aspect, this feature is not as permanent or damaging as concrete itself.

● Interior Spaces - Frame Construction

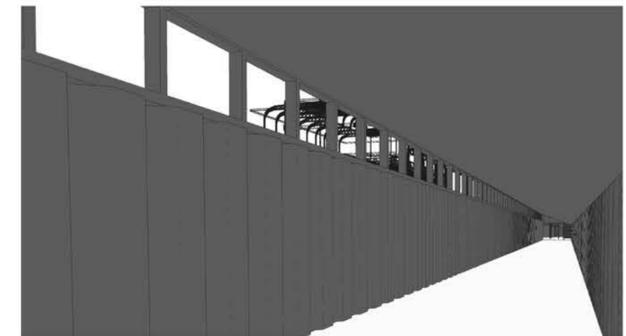
5. The next stage in the construction process is to build the viewing platforms. These are very simply put together using minimal screws as they are connected through various joinery techniques shown in the sketches to the left. The diagrams further left show the formation of the frame, which will hold up the higher levelled platforms and connecting staircases. I decided to use joinery techniques as it will be a much more cost effective way to connect materials. The technique provides support and a frame which will take a heavy load.

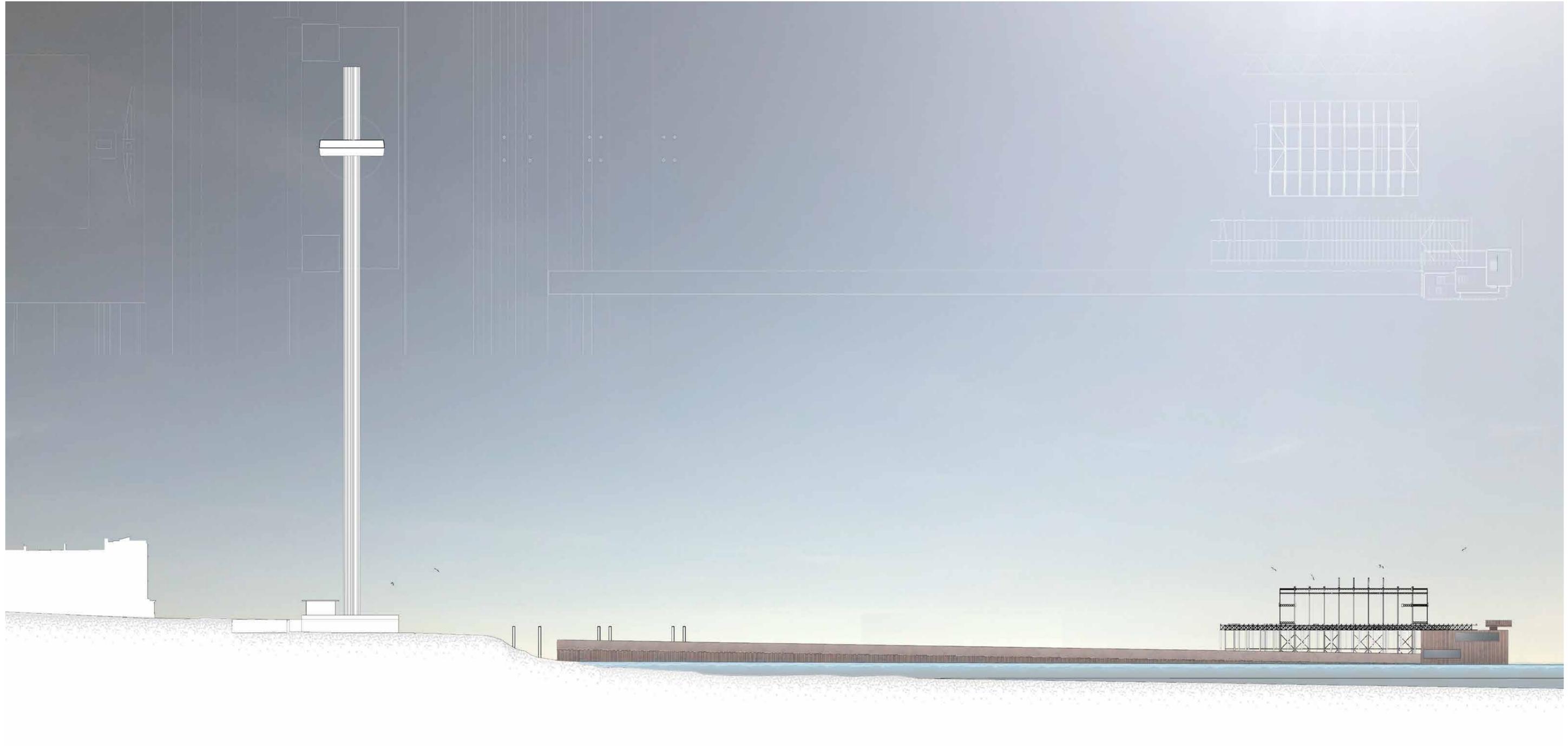
● Final Construction Details - Skin - Programme Elements

6. This phase of the construction process is very similar to stage 3 using the spanning technique which will allow a stable floor. This will also be where other levels start to get their skin, i.e. the handrails/balcony pieces (replicating the corten sheet piles) etc. The stairs will be inserted as they will be pre-made off site. The roof will also be added over the tunnel (Rolled steel sheets) The other elements to my programme (kitchen equipment, water, gas, electricity etc.) will be also added at this point. Once the skin has completed being installed, the remaining furniture and other elements to the festival will be added. This will provide a comfortable environment for the guest who shall attend this pavilion.



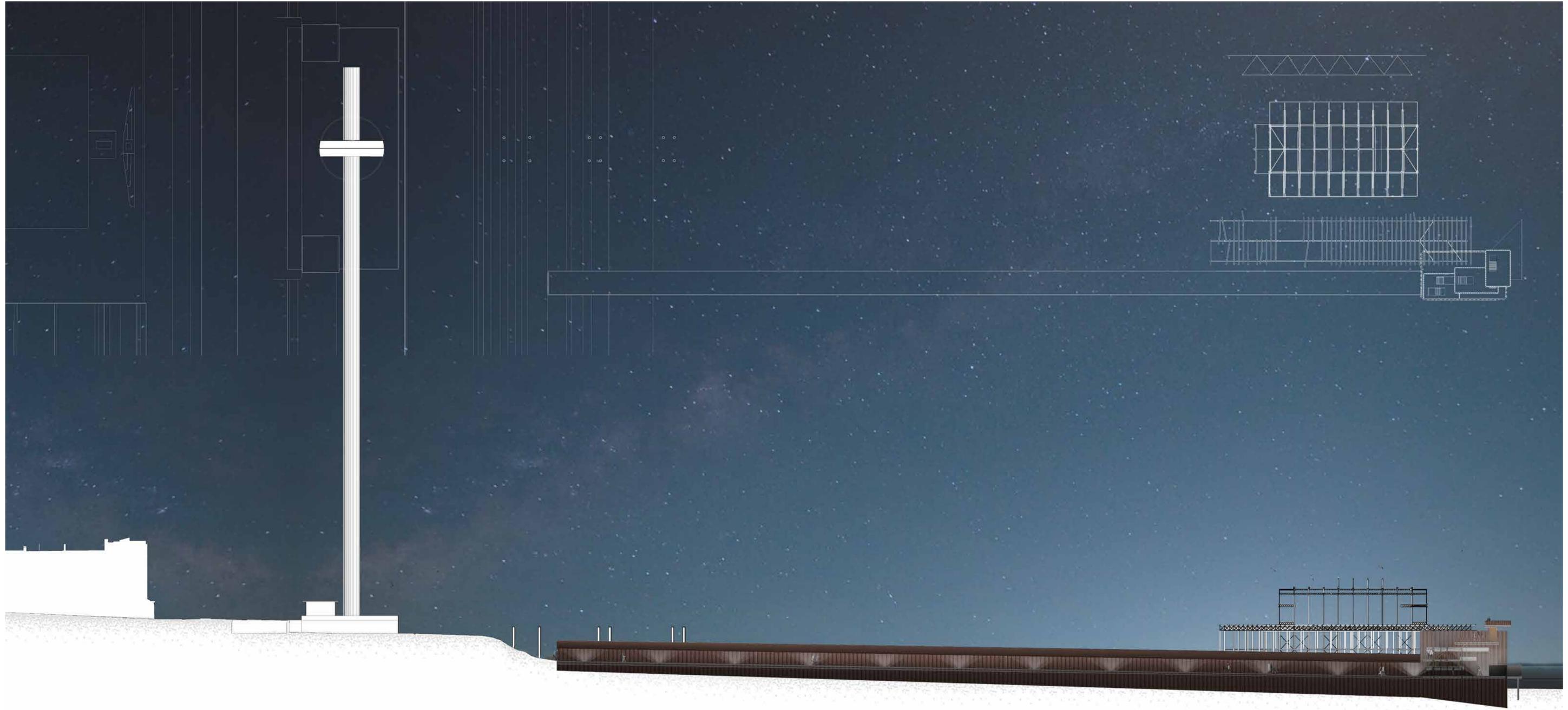
Final Design shown in Axonometric View, and a Quick Visual showing Experience Within Tunnel. West Pier can be seen while walking through.





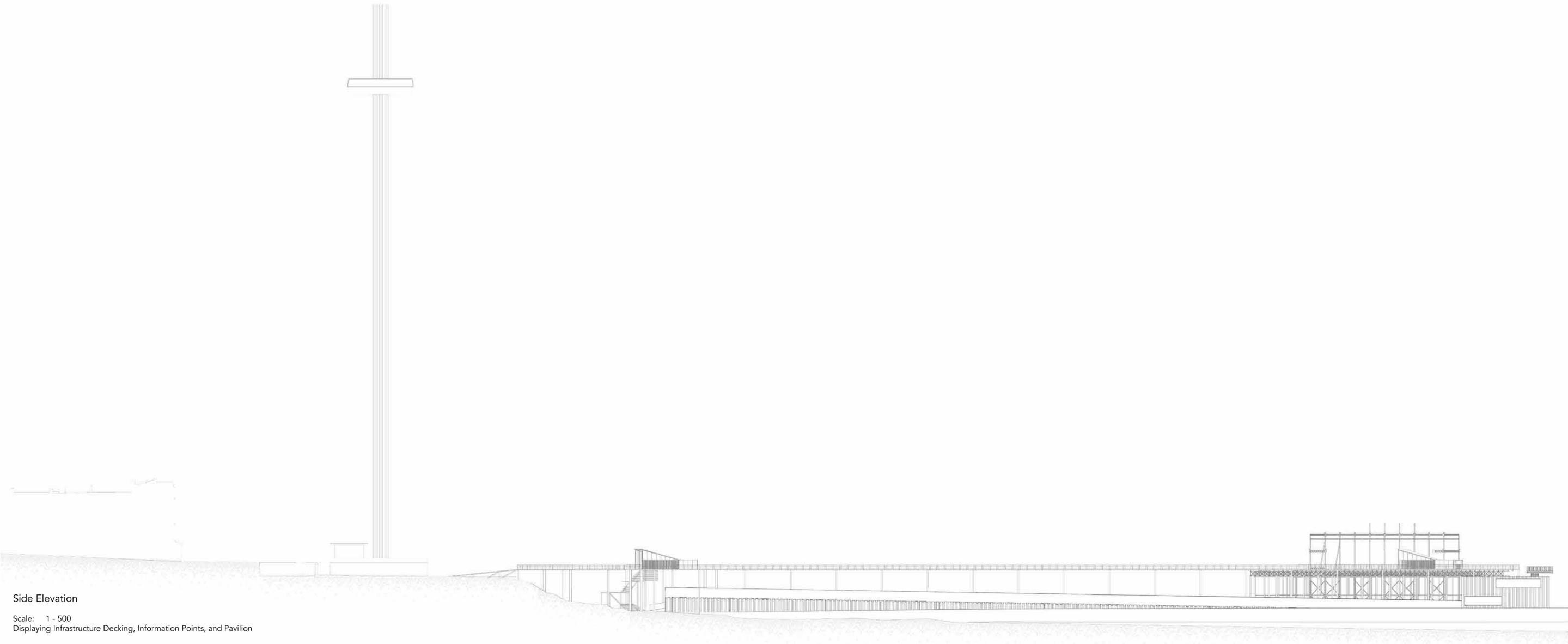
Pavilion - Plan View & Side Elevation

Scale: 1 - 500



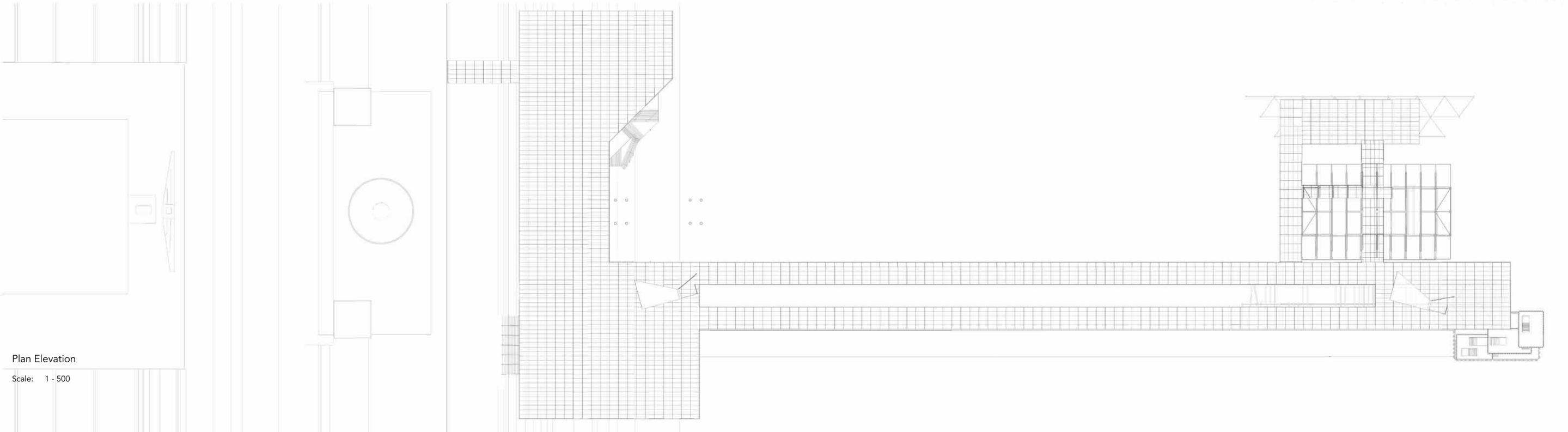
Pavilion - Plan View & Cross Section - Night View

Scale: 1 - 500



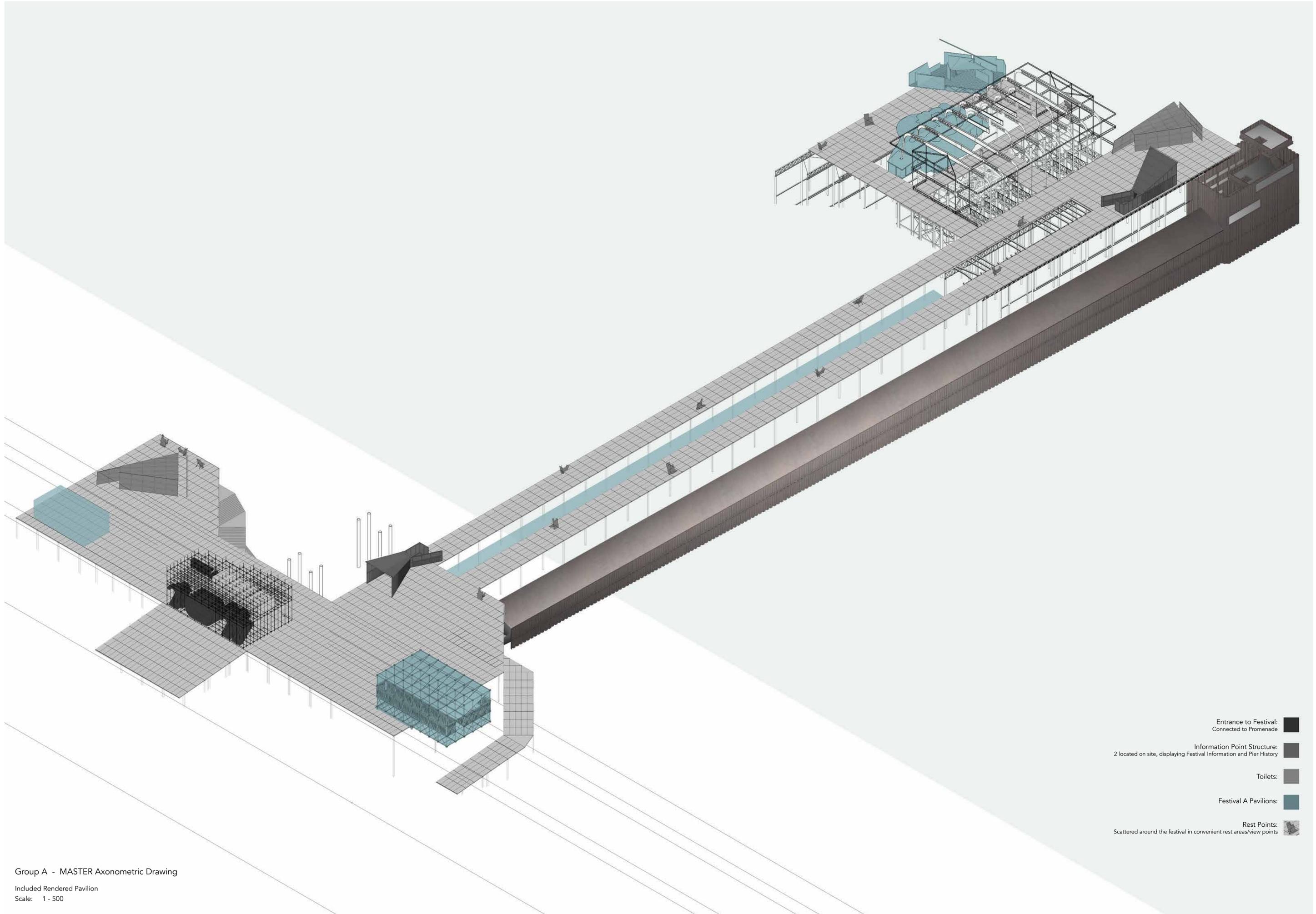
Side Elevation

Scale: 1 - 500
Displaying Infrastructure Decking, Information Points, and Pavilion



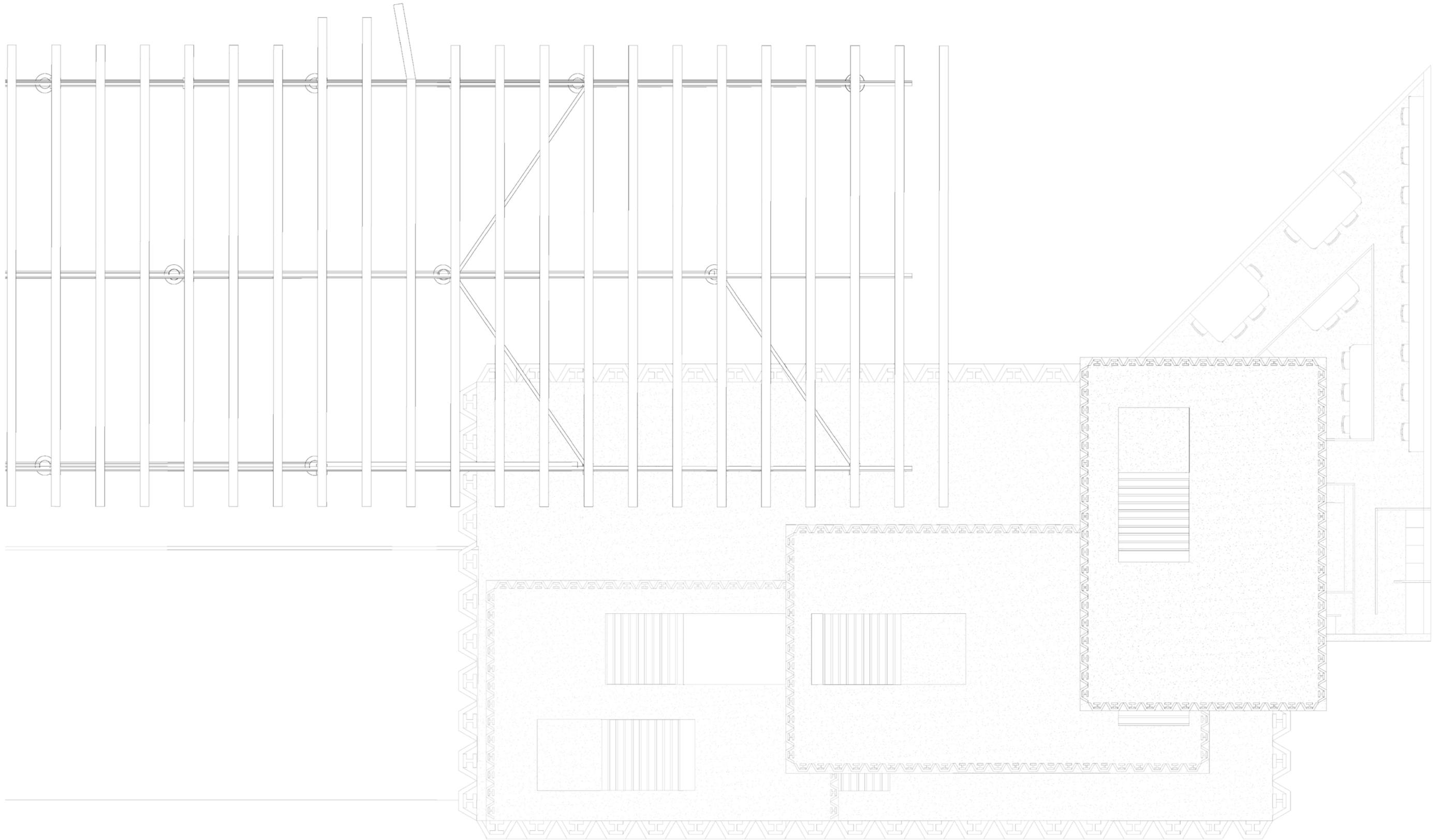
Plan Elevation

Scale: 1 - 500



Group A - MASTER Axonometric Drawing

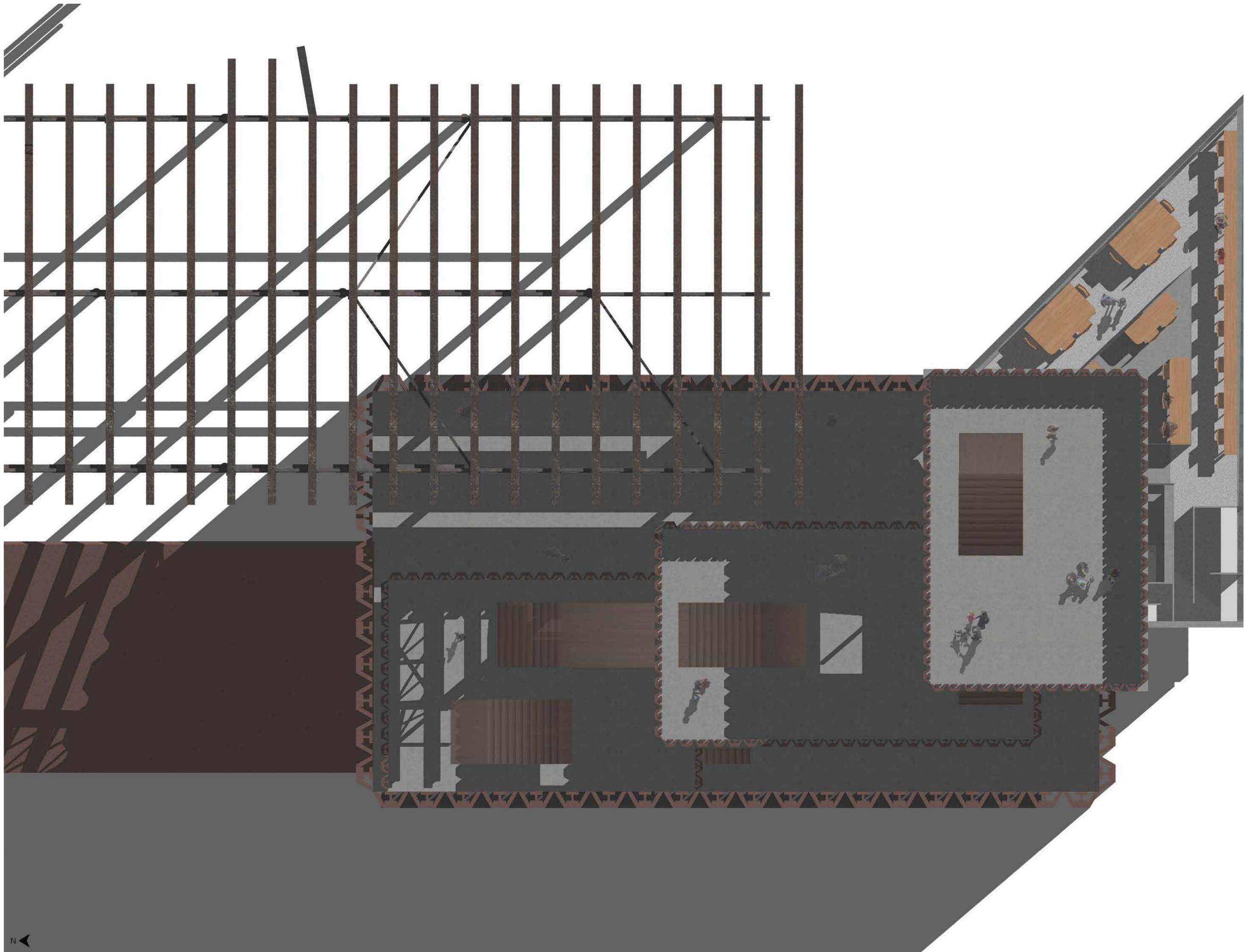
Included Rendered Pavilion
Scale: 1 - 500



Pavilion - Plan Elevation

Scale: 1 - 50
Line Drawing





Pavilion - Plan Elevation

Scale: 1 - 50



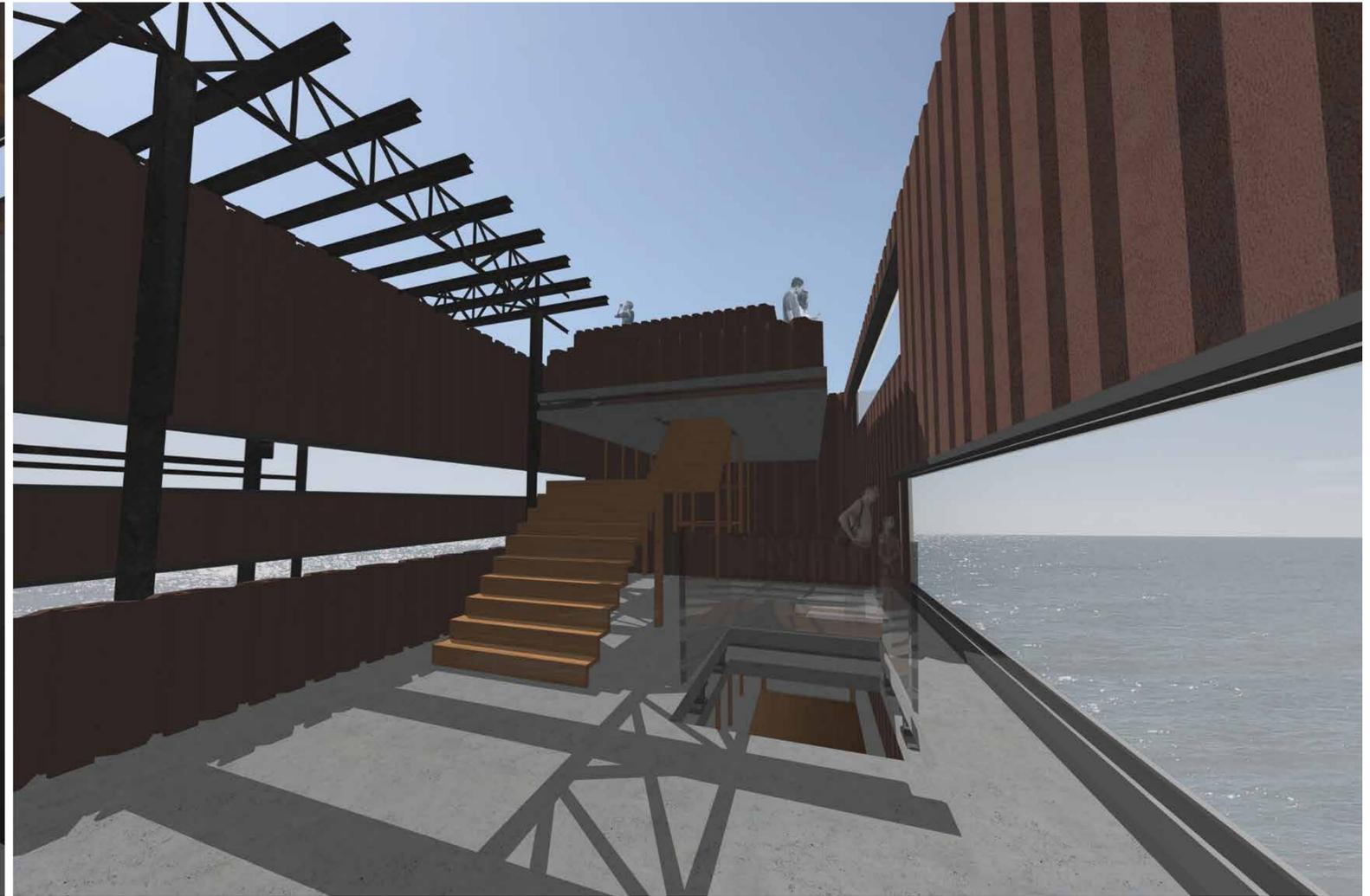


Pavilion - Perspective Sequence 01

Experience within Tunnel, and 1st Viewing Chamber. Leading to the Underwater Restaurant...



Pavilion - Perspective Sequence 02
Displaying Experience inside Underwater Restaurant...



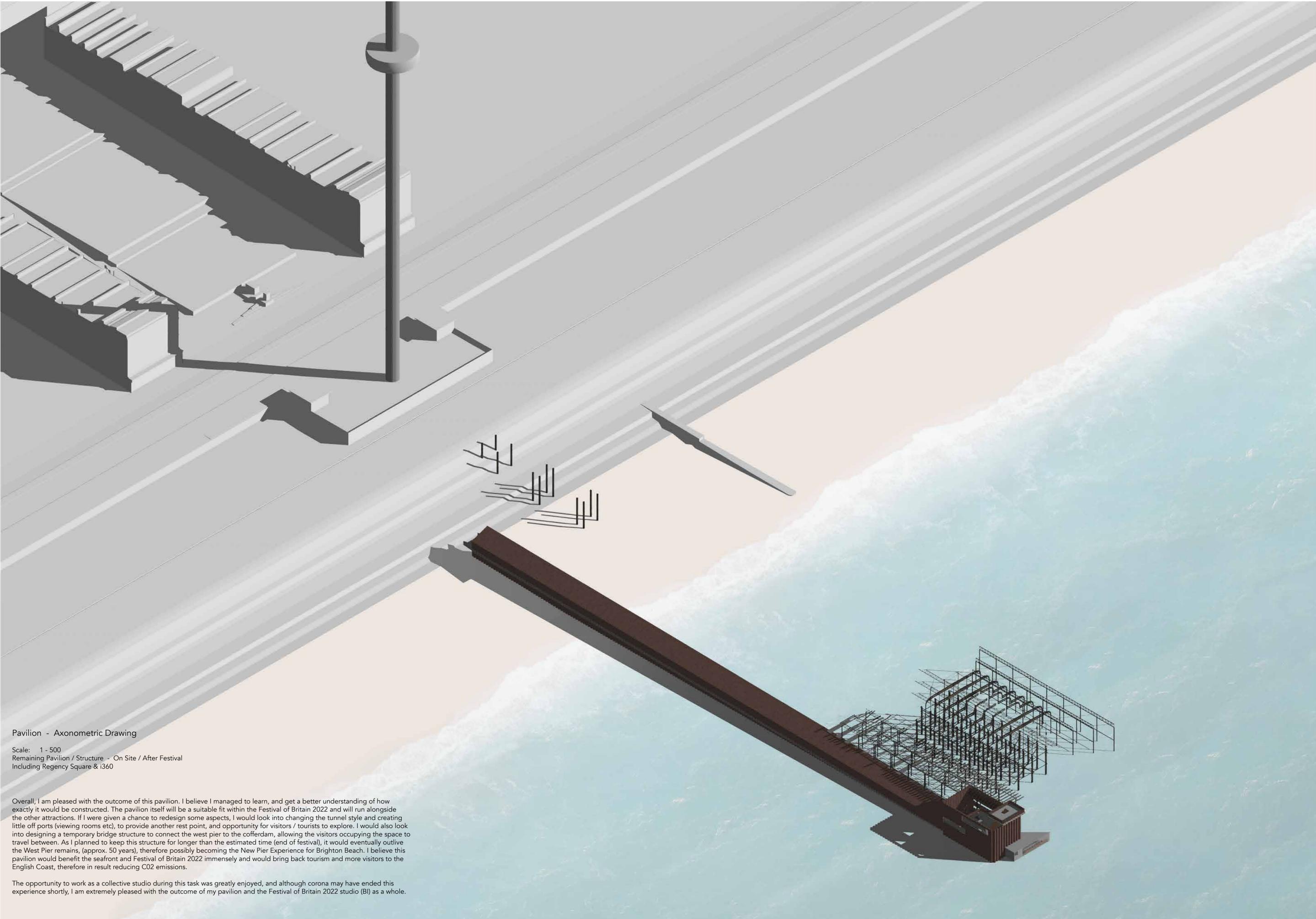
Pavilion - Perspective Sequence 03

Displaying the Experience within the Main Chamber, and from the 1st Level Viewing Platform



Pavilion - Perspective Sequence 04

Displaying the Experience from the 2nd Level Viewing Platform

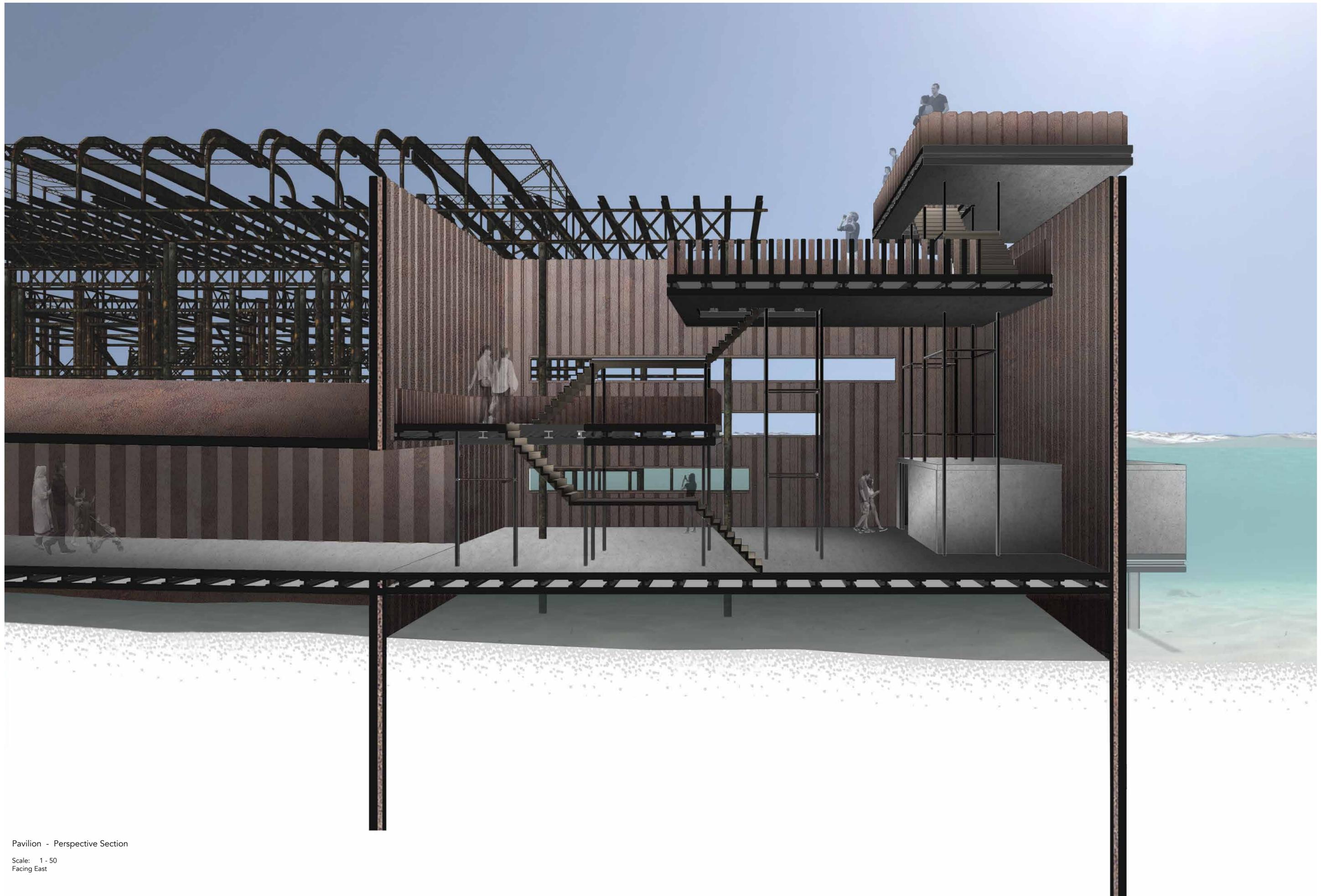


Pavilion - Axonometric Drawing

Scale: 1 - 500
Remaining Pavilion / Structure - On Site / After Festival
Including Regency Square & i360

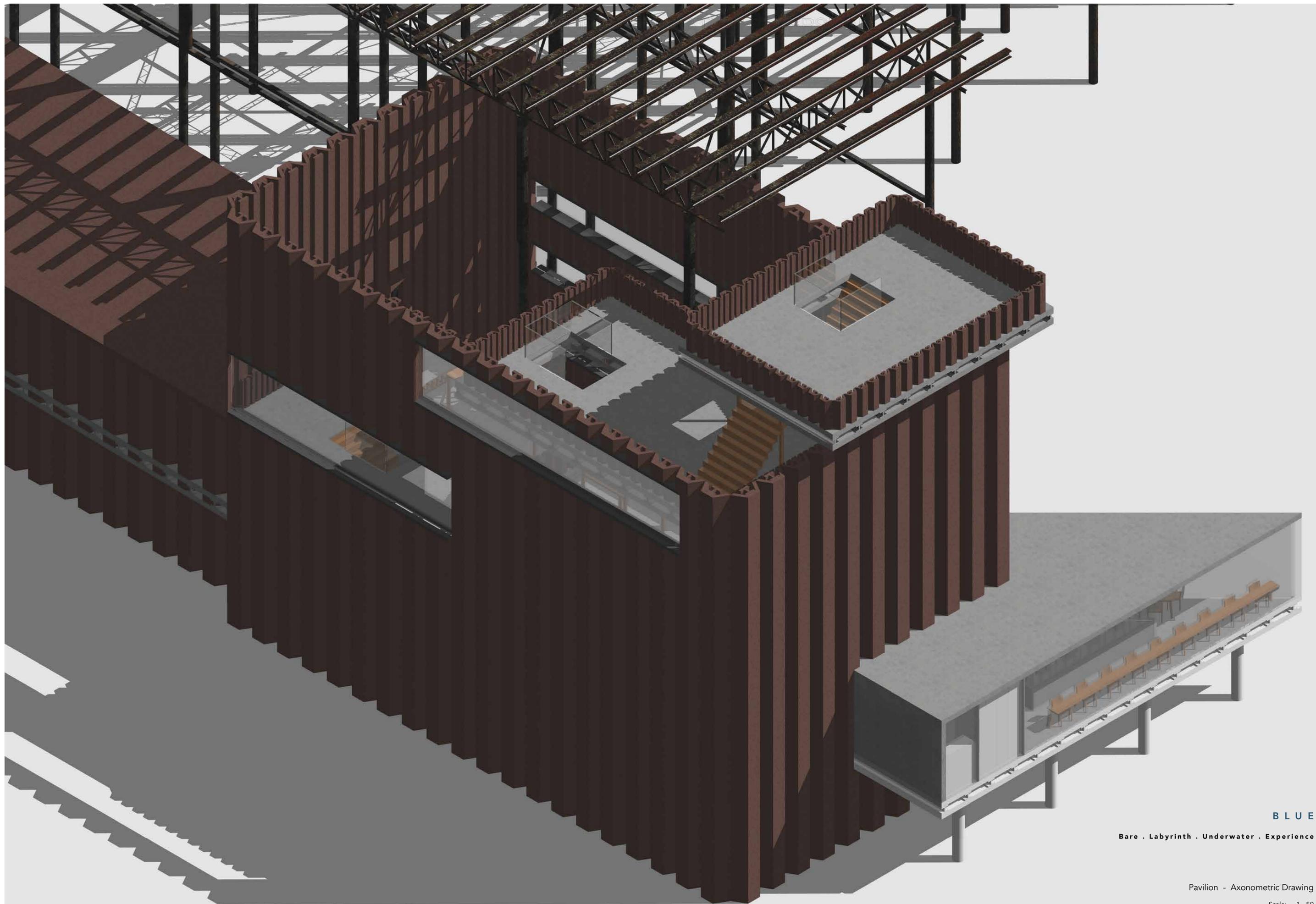
Overall, I am pleased with the outcome of this pavilion. I believe I managed to learn, and get a better understanding of how exactly it would be constructed. The pavilion itself will be a suitable fit within the Festival of Britain 2022 and will run alongside the other attractions. If I were given a chance to redesign some aspects, I would look into changing the tunnel style and creating little off ports (viewing rooms etc), to provide another rest point, and opportunity for visitors / tourists to explore. I would also look into designing a temporary bridge structure to connect the west pier to the cofferdam, allowing the visitors occupying the space to travel between. As I planned to keep this structure for longer than the estimated time (end of festival), it would eventually outlive the West Pier remains, (approx. 50 years), therefore possibly becoming the New Pier Experience for Brighton Beach. I believe this pavilion would benefit the seafront and Festival of Britain 2022 immensely and would bring back tourism and more visitors to the English Coast, therefore in result reducing CO2 emissions.

The opportunity to work as a collective studio during this task was greatly enjoyed, and although corona may have ended this experience shortly, I am extremely pleased with the outcome of my pavilion and the Festival of Britain 2022 studio (BI) as a whole.



Pavilion - Perspective Section

Scale: 1 - 50
Facing East



B L U E

Bare . Labyrinth . Underwater . Experience

Pavilion - Axonometric Drawing

Scale: 1 - 50