

LANDSCAPE ELECTIVE 2024

ARCHITECTURAL DESIGN 3 | RESEARCH, CONCEPTUALISATION & DESIGN

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HOUSING

There Have Been Numerous Housing Prototypes In Alexandra Throughout The Years. From Township House Plans During The Apartheid Era To Single-Sex Hostels. Low Income, Informal Housing Is Quite Prevalent In Alexandra Due To The Housing Crisis. As A Result, Alexandra Is Extremely Densely Populated With Shacks Or Makeshift Housing. There Have Been Attempts By Government Through Projects Like The 2001 Alexandra Renewal Project To Improve The Housing Crisis In Alex However, Very Little Has Changed Or Improved.

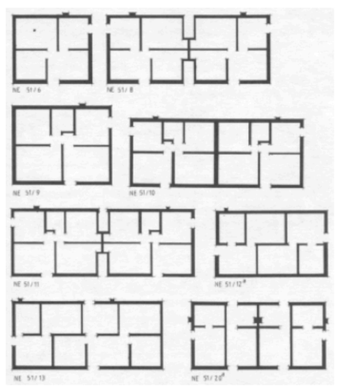


Fig. 1: A selection of "NE 51" township house plans. (*Source:* Calderwood, 1953, and Calderwood and Connell, 1952).

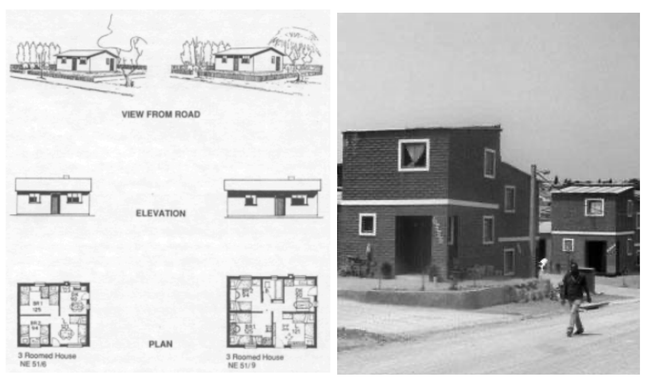


Fig. 2: Design sketches of standard houses. (*Source:* Calderwood and Connell, 1952).

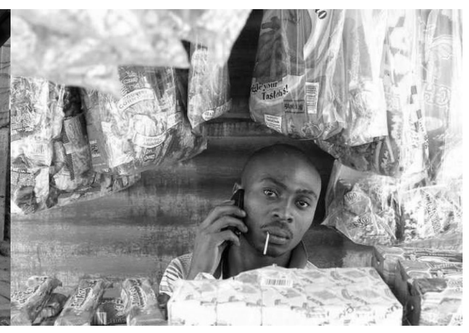


ECONOMY

Alexandra Is Surrounded By Factories And Industry That Is Creating Job Opportunities For Residents. Most Residents Migrate To Alexandra From Other Parts Of The Country And Continent In Search For Better Job Opportunities.

Like Most Townships,Informal Trading Continues To Be A Big Part Of Alex's Township Economy, With Many People Providing For Their Families Through These Means Especially Under The Dark Cloud Of Skyrocketed Unemployment Rates In South Africa .





WATER, SANITATION AND ELECTRICITY

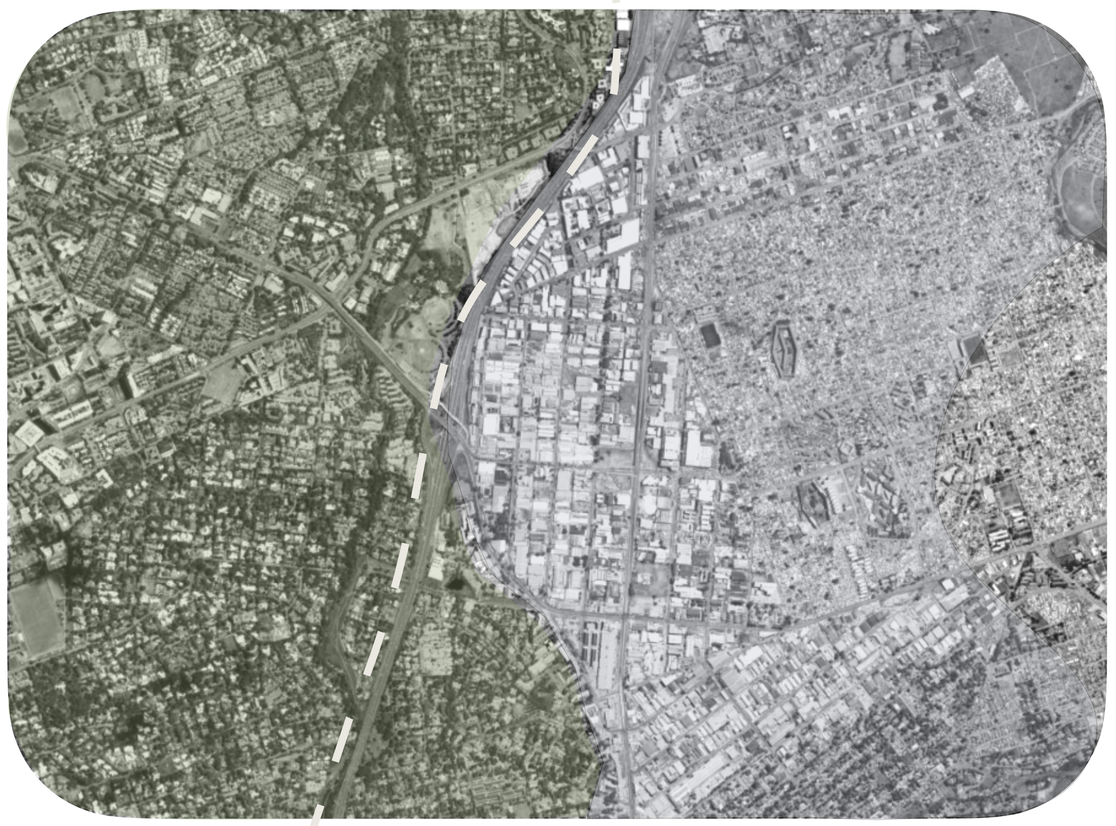
Water And Sanitation In This Area Is Not Of An Acceptable Standard. There Is A Very Obvious Lack Of Service Delivery That Leaves The People Of Alexandra Living In Unpleasant Conditions That Pose A Daily Threat To Their Health And Quality Of Life. Many Homes Do Not Have Running Water So They Get Their Daily Supply From Taps Shared By The Community. Members Of This Community Are Disproportionally Affected By The Load-Shedding Crisis And Many Have Resorted To Illegal Electricity Connections To Their Homes





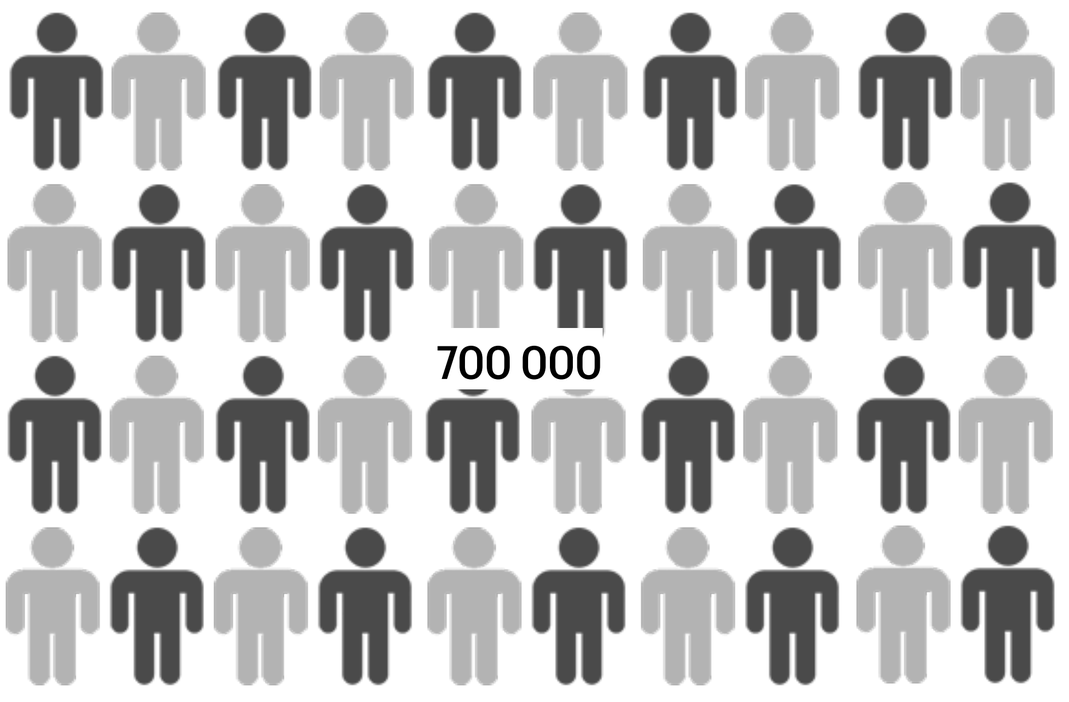
SANDTON VS ALEXANDRA

Alexandra Is A Township Situated In The North Of Johannesburg, Neighbouring Sandton (The Richest Square Mile In Africa). This Unequal Space Is A Long Standing Historical Example Of The Socio-Economical Divide In South Africa.In Comparison To Sandton, The People Of Alexander Don't Have Nearly The Same Access To Opportunities, Services And Infrastructure.



POPULATION

When Alexandra Was First Established In 1912, Only 40 Families Inhabited The Land. According To The 1029 Census, The Estimated Population In Alex Now Stands At An Estimated 700 000 People All Living On 6,914Km2 Of Land.

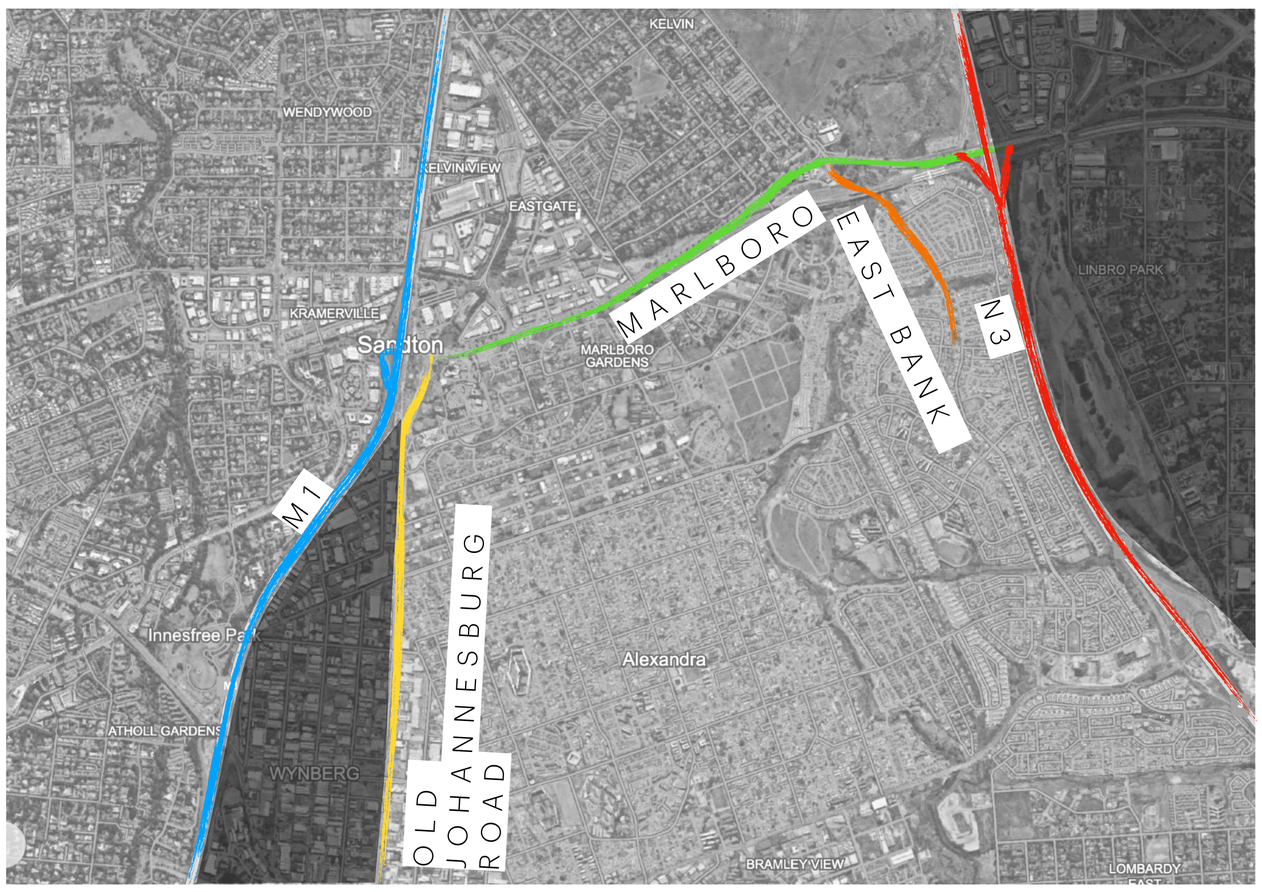


SITE

SECTION AA

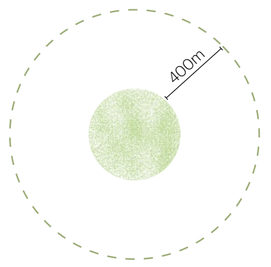
EXISTING ACTIVITIES





SITE ANALYSIS

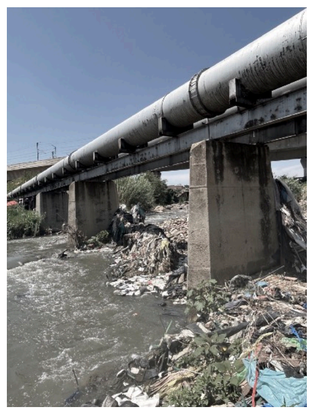
1. Identifiable centre and edge of neighbourhood “absorbent surfaces”
2. Walkable size [20-200 acres/16-81 ha 1/4 radius 400m from centre edge]
3. Mix of land uses & housing typologies
4. Integrated network of walkable streets
5. Special sites for civic purpose



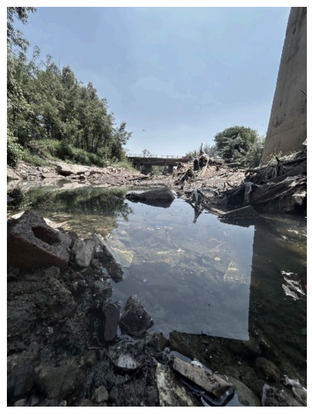
- An emphatic argument for sustainability through mixed use development
- Fluid design that gives back to the community and empowers it
- Biophilic architecture where human being interact with nature in to strengthen the human interdependence with natural systems



SITE OBSERVATIONS







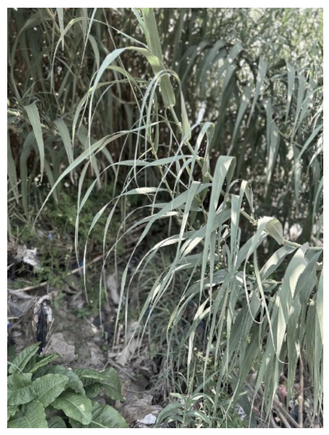





outdoor religious spaces

Jukskei river

vegetation on site






Mr Martin Phakathi & his car wash

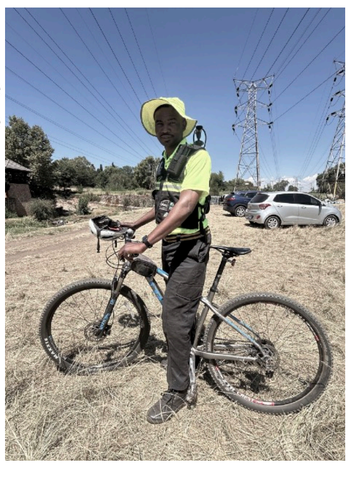
Ntate Lesitsi Matheta and his stall






CASE STUDY

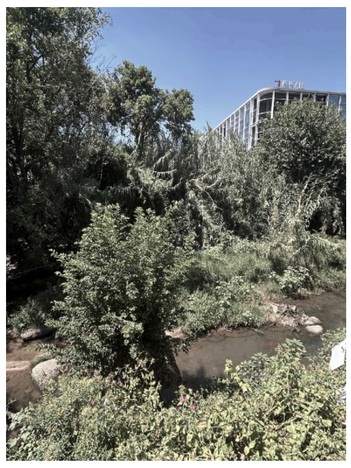
passive surveillance







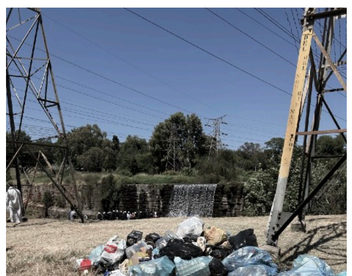
Pedestrian /cyclist bridge




restaurants





benches



waste



children's playground

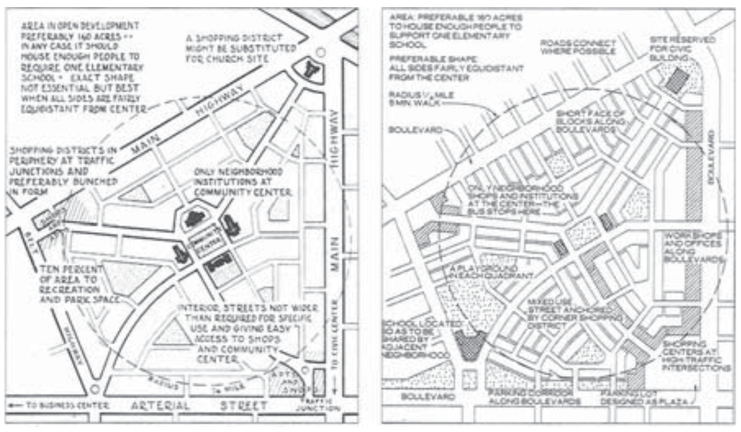


Fig. 10 Neighborhood Unit by Clarence Perry (left), updated by Duany Plater-Zyberk & Co. (right)

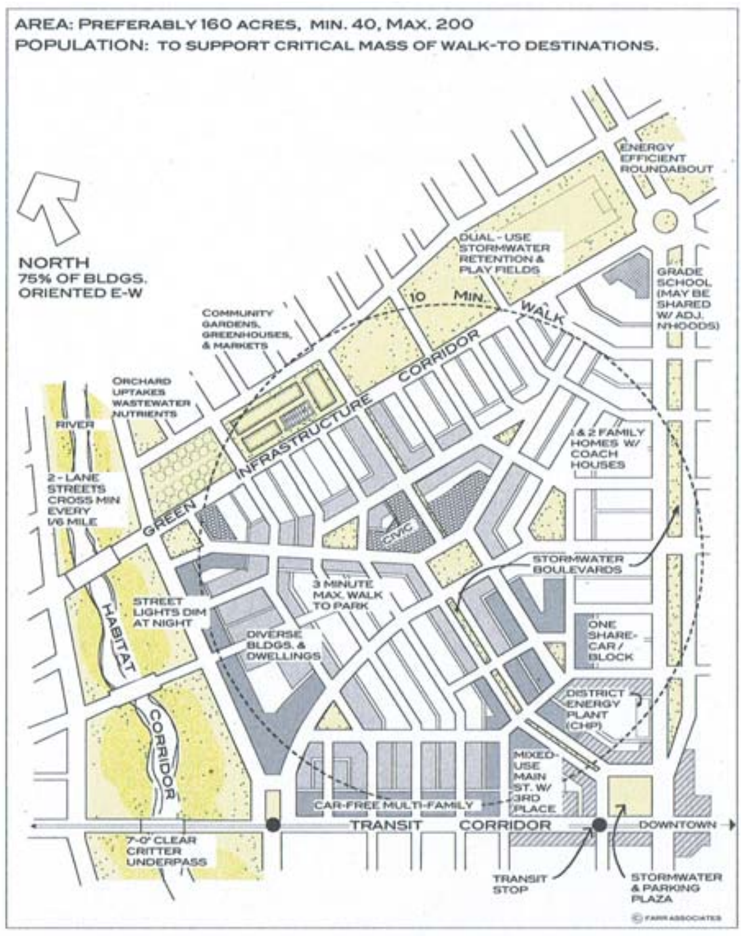
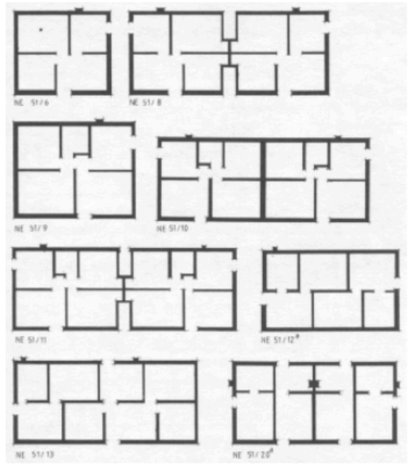


Fig. 11 A sustainable neighborhood unit (building blocks of a sustainable corridor) by Farr Associates



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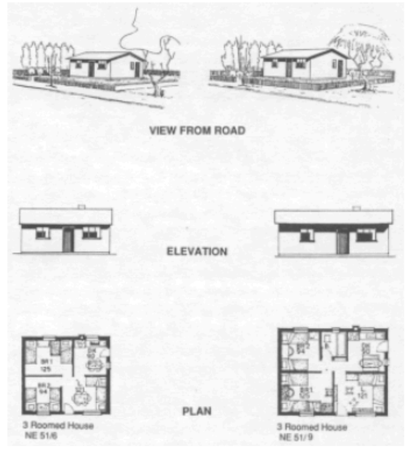
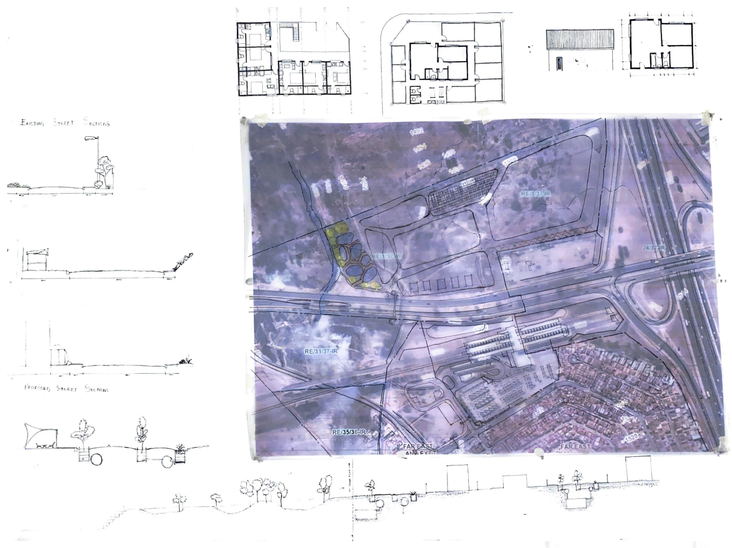


Fig. 2: Design sketches of standard houses. (*Source:* Calderwood and Connell, 1952).



"Most of the double storey houses that you see were previously RDP houses , which means that people have got the economic power to develop what they have into what is suitable for them."

- Mr Martin Phakathi











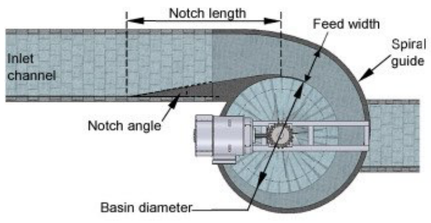


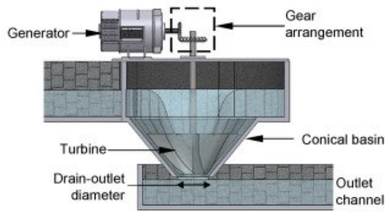




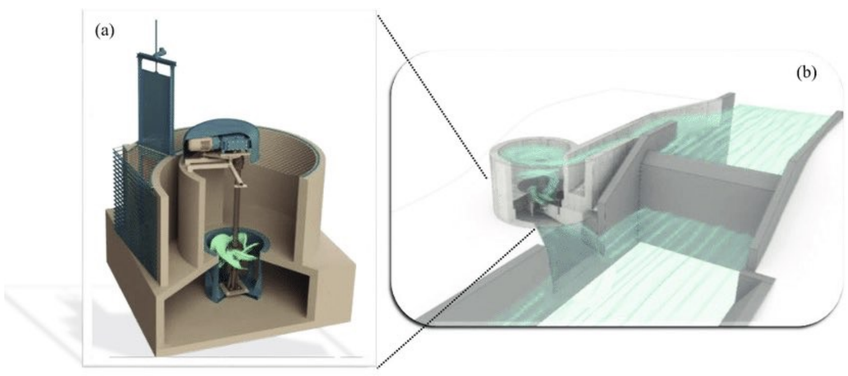
Water Vortex

Water Vortex Generator

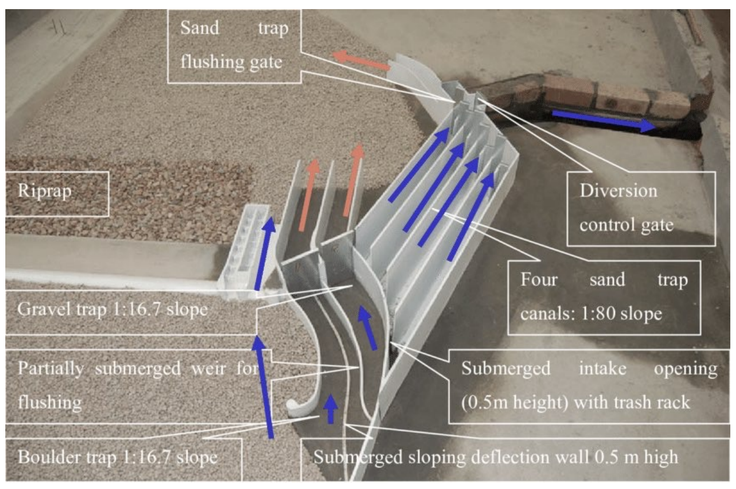




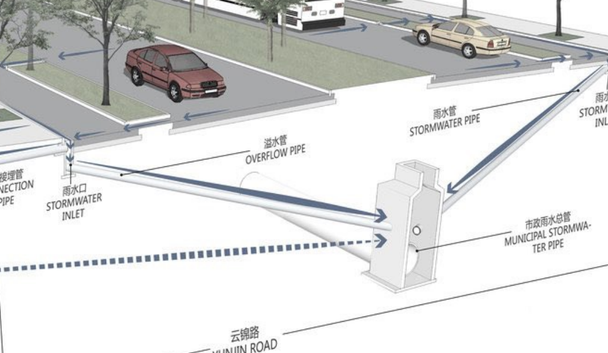


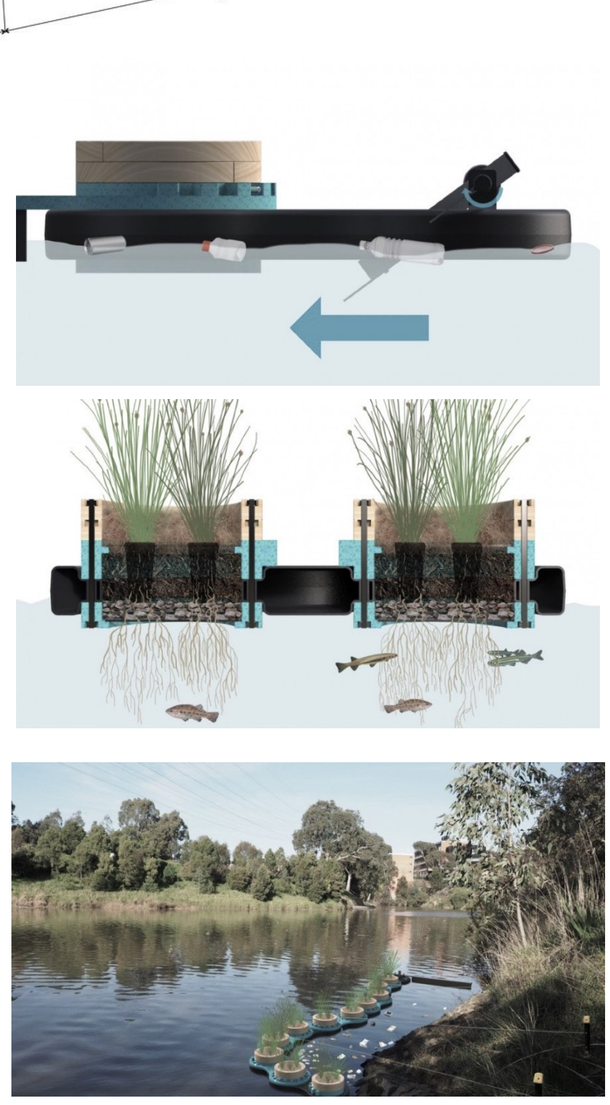


Water Purification







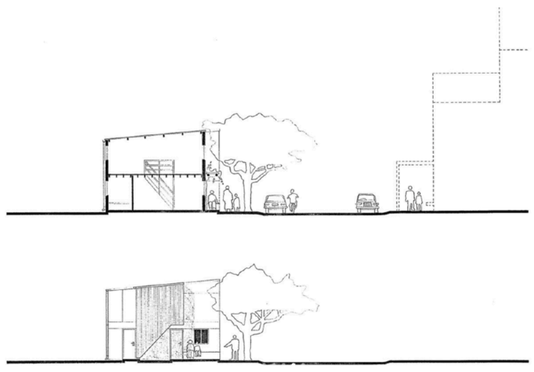


Pelip Housing

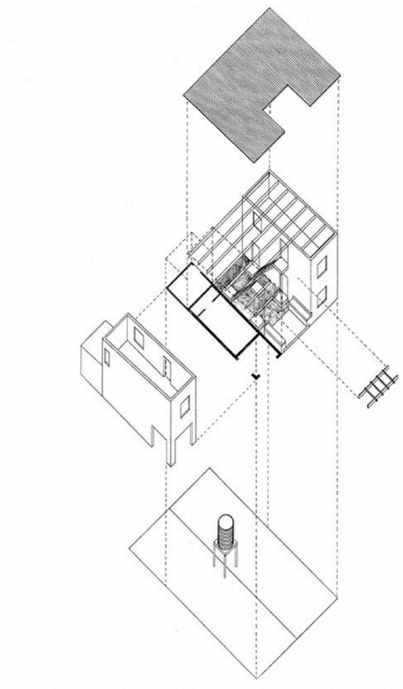
New Brighton, Port Elizabeth
1999







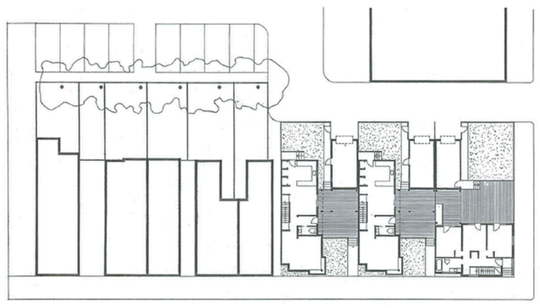


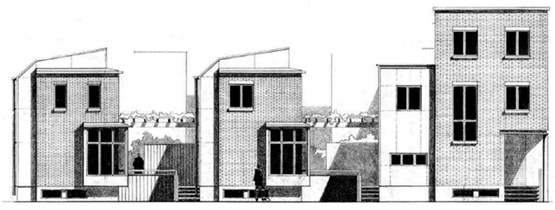


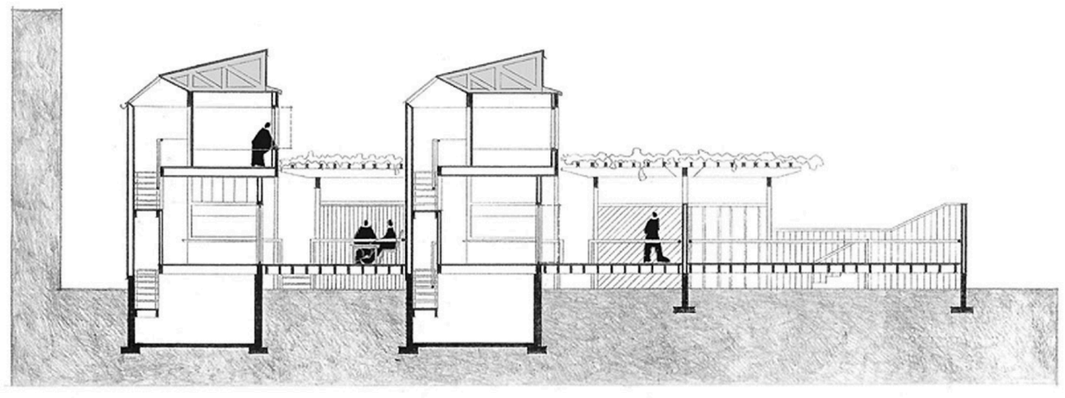


Soulard Housing

Saint Louis, USA
Unbuilt, 1999



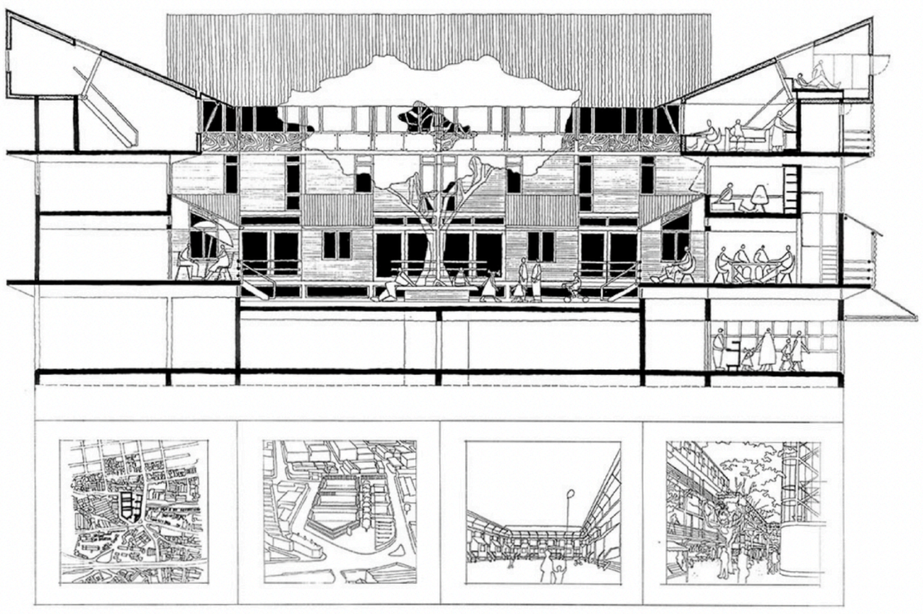






Salisbury Claims Housing

Johannesburg, South Africa
Unbuilt, 1994



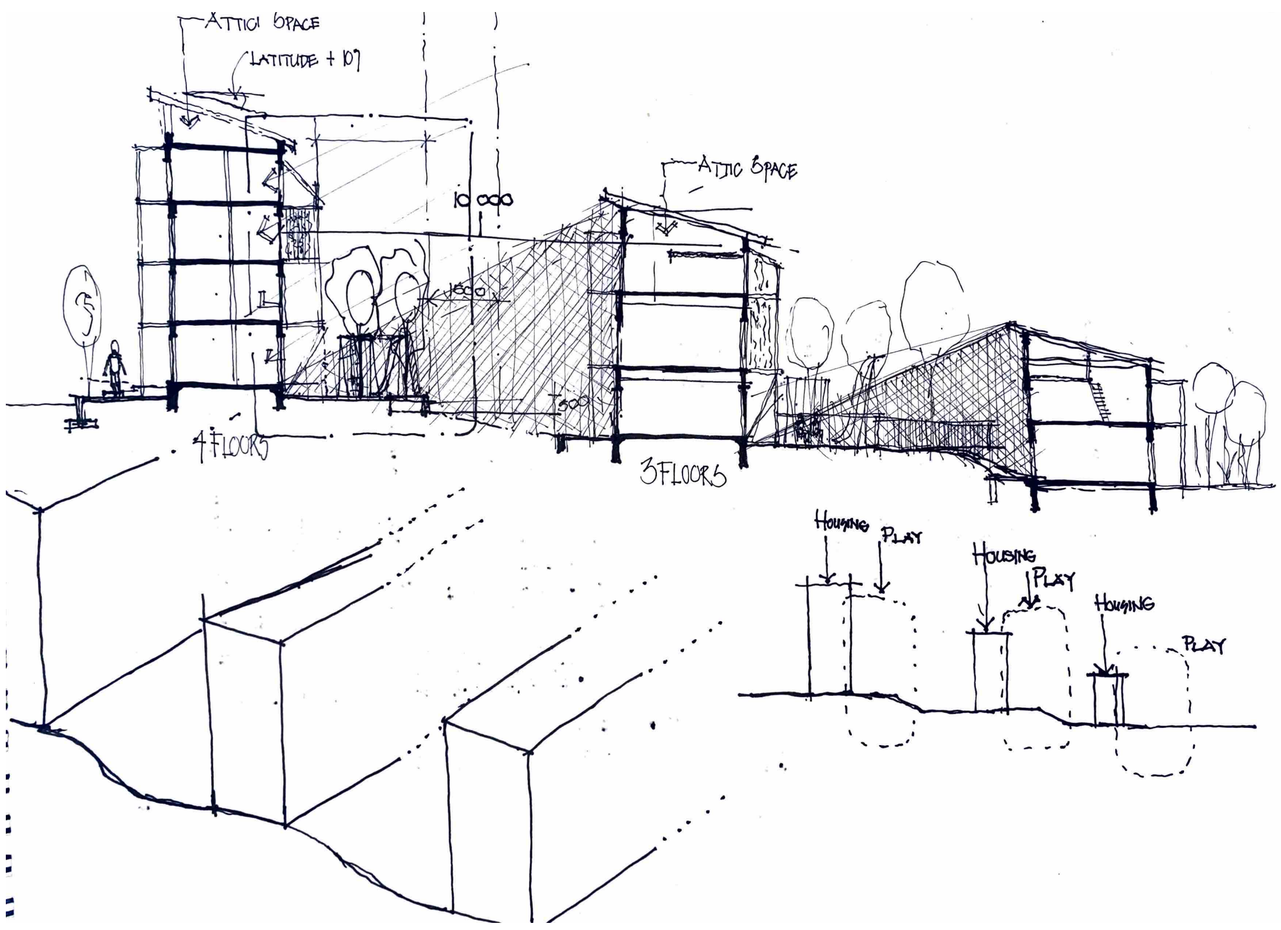


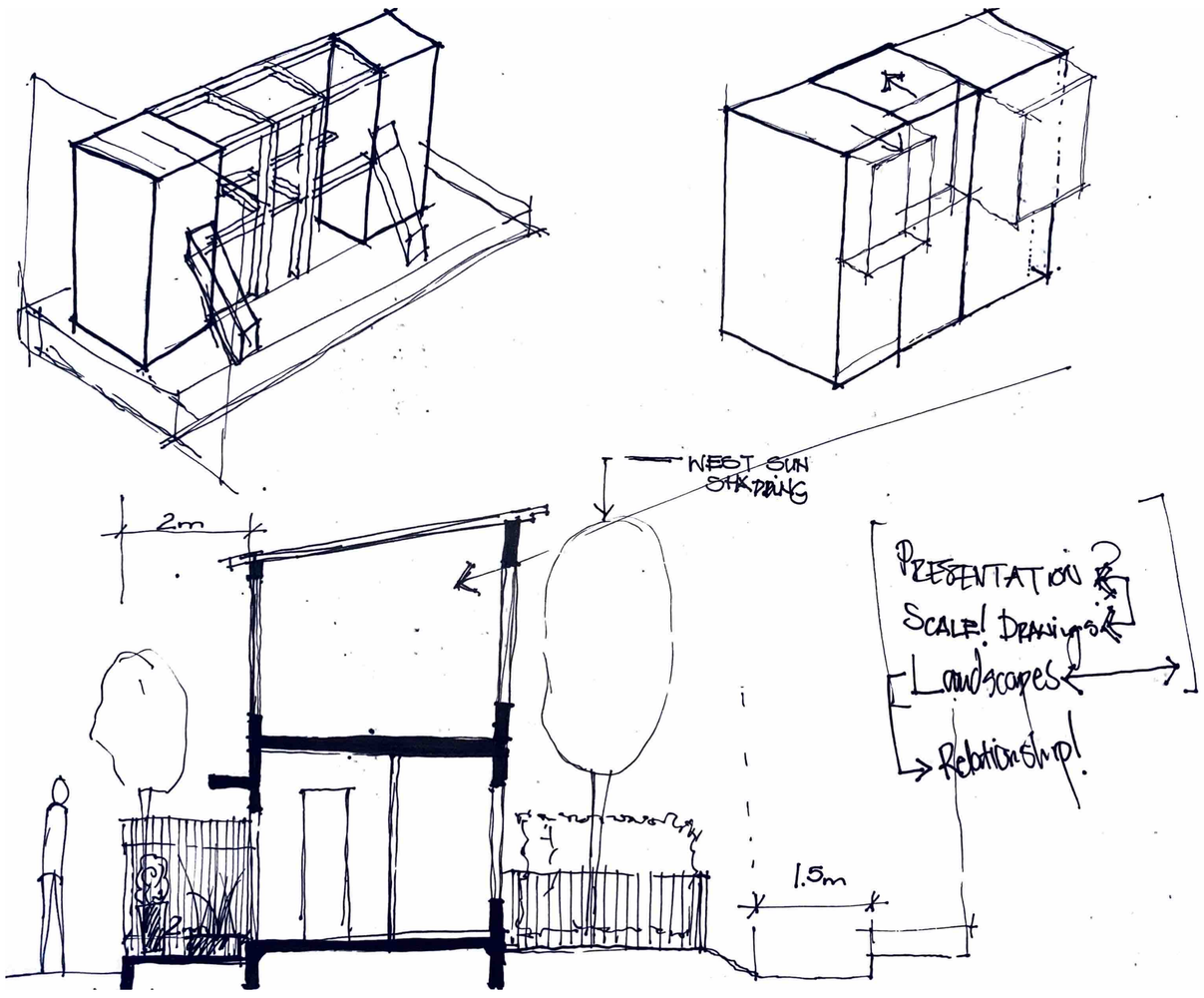


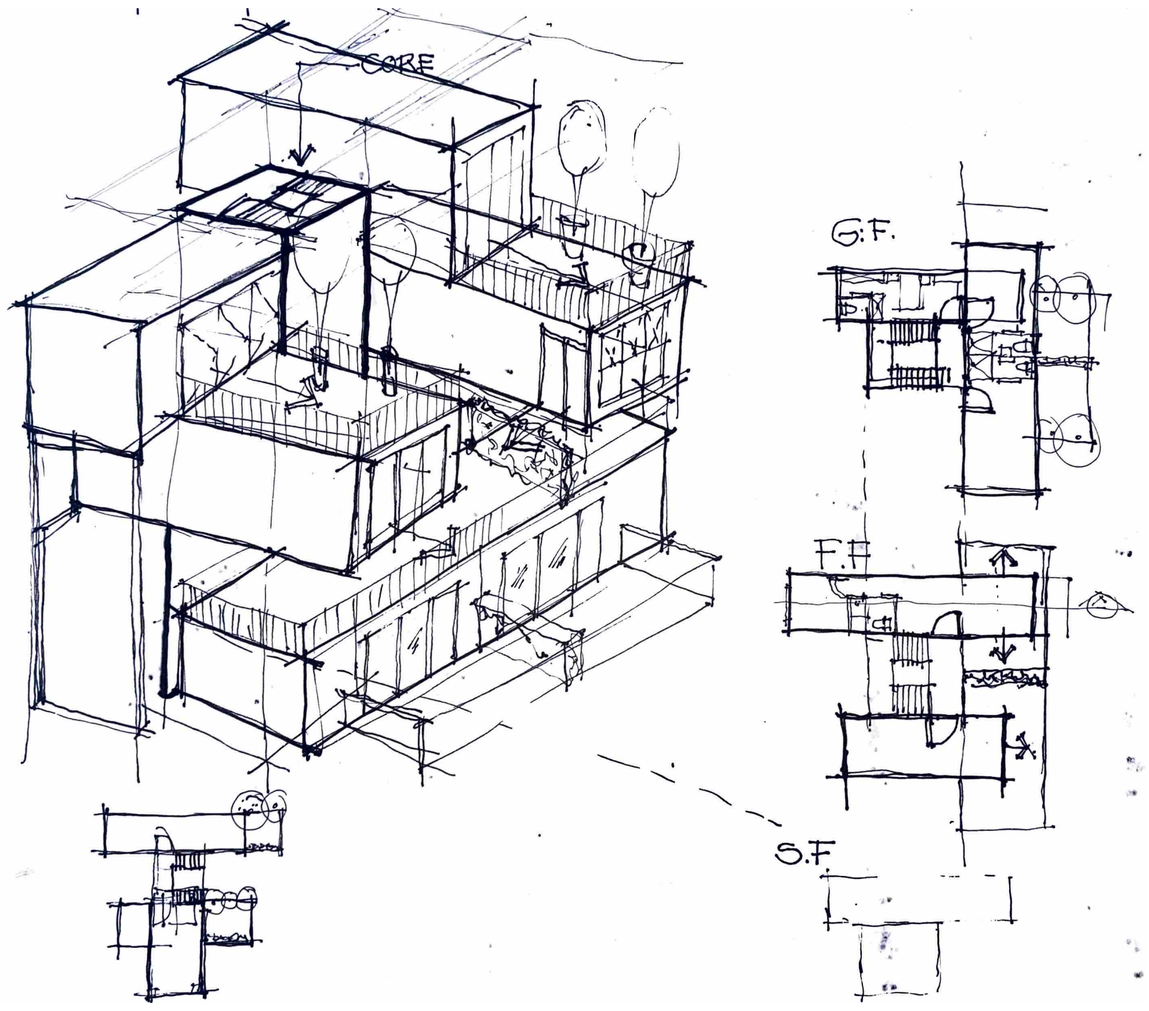
Location: Constitución, Chile
Client: Arauco Forest Company
Project Typology: Housing
Size of Each Unit: 57 m² (initially, each unit can be constructed further to a total area of 85 m²)
Architectural style: Modern

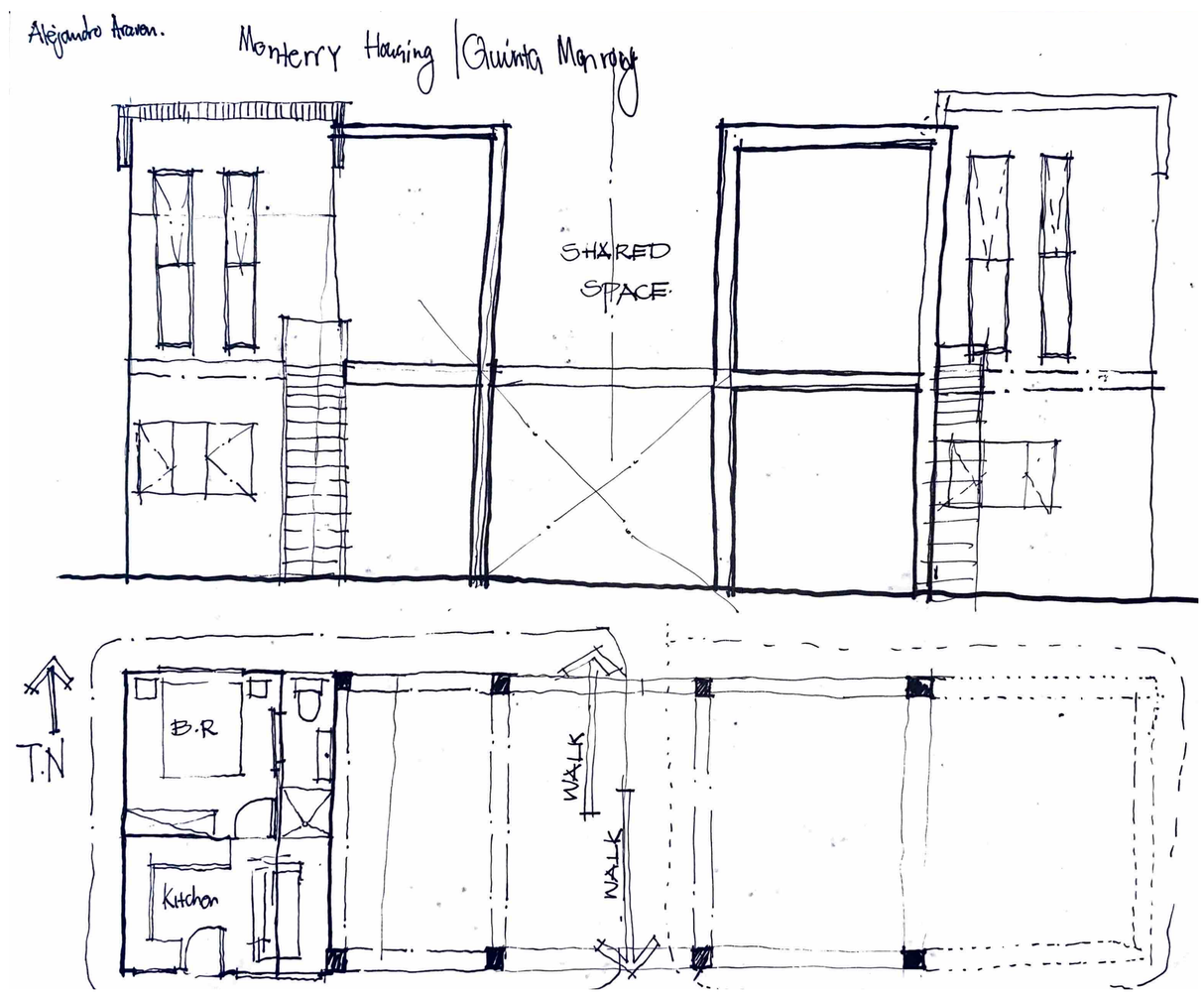


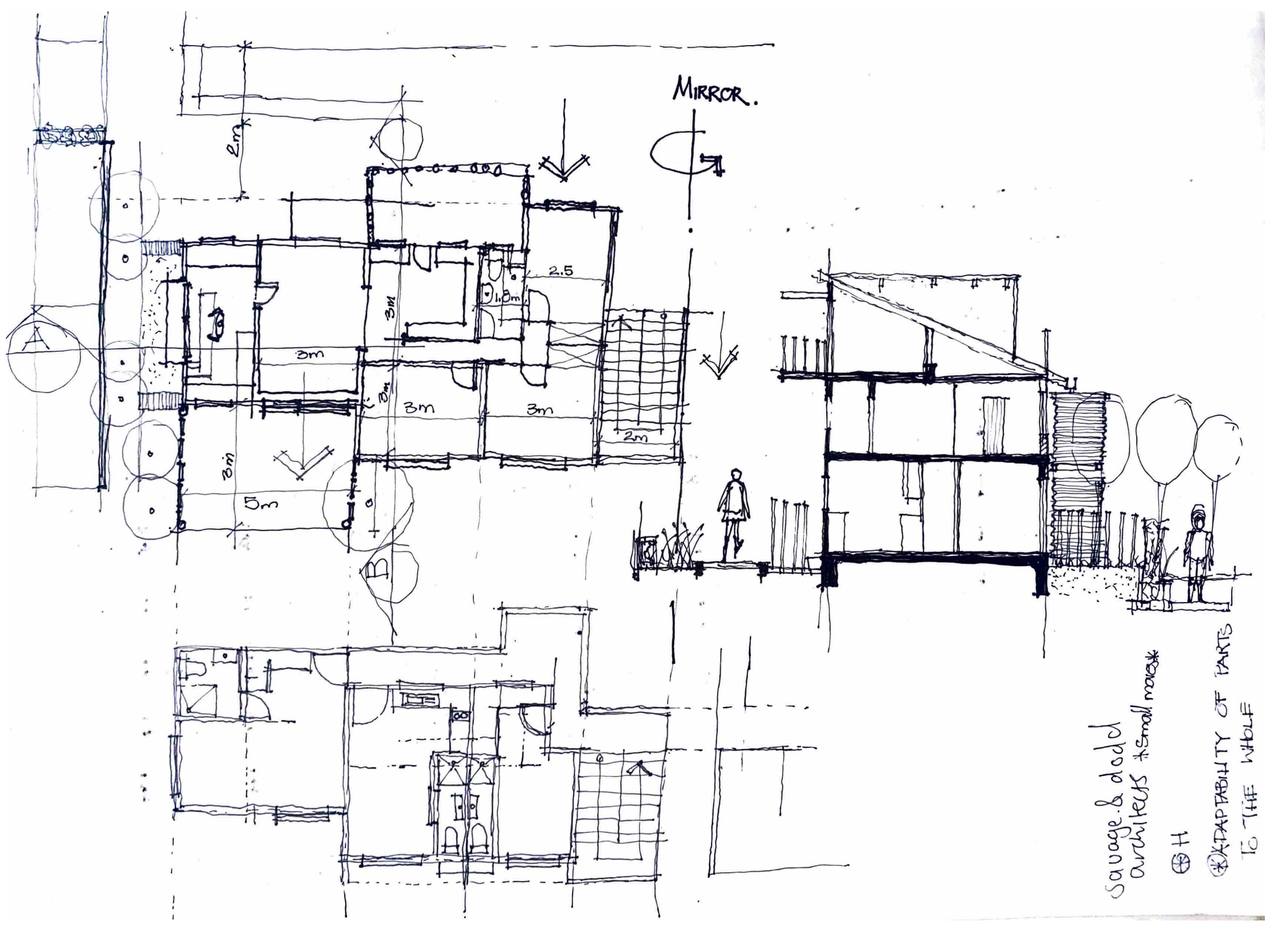


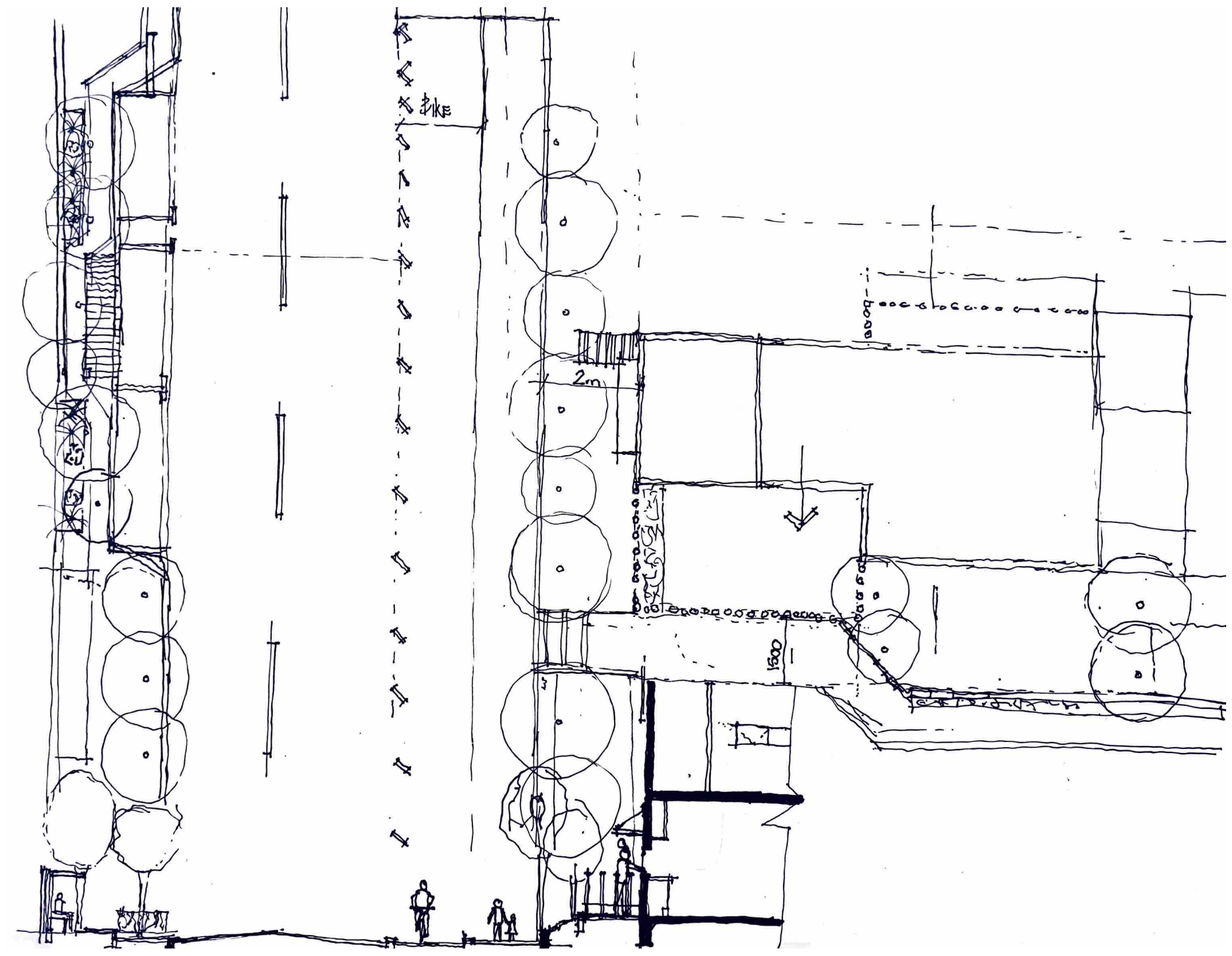

ATTIC SPACE
LATITUDE + 107
ATTIC SPACE
4 FLOORS
3 FLOORS
HOUSING
PLAY
HOUSING
PLAY
HOUSING
PLAY

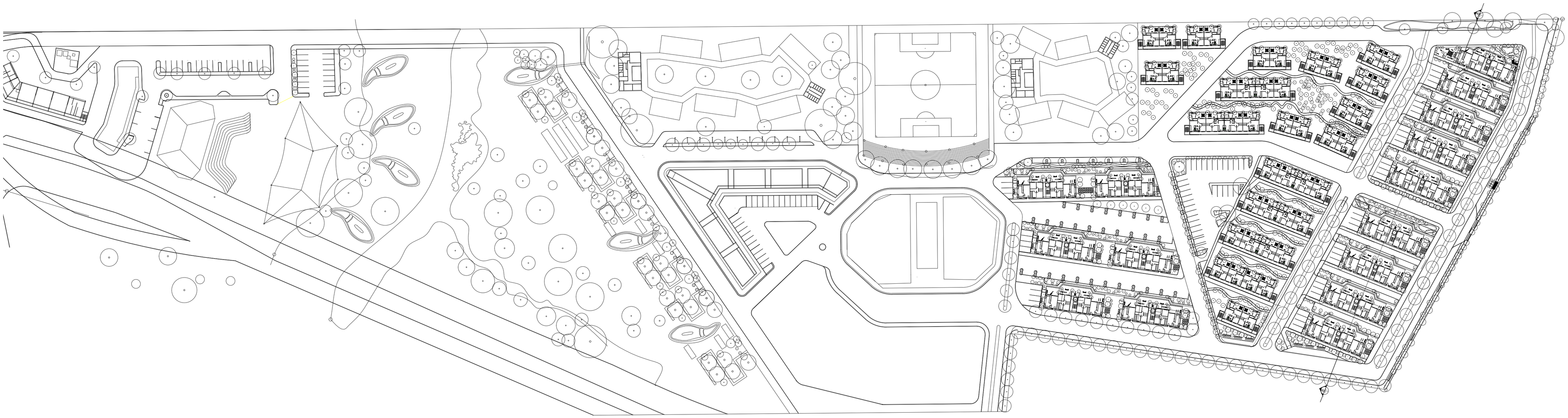

2m
WEST SUN SHADING
1.5m
PRESENTATION
SCALE! DRAWINGS
LANDSCAPES
RELATIONSHIP!

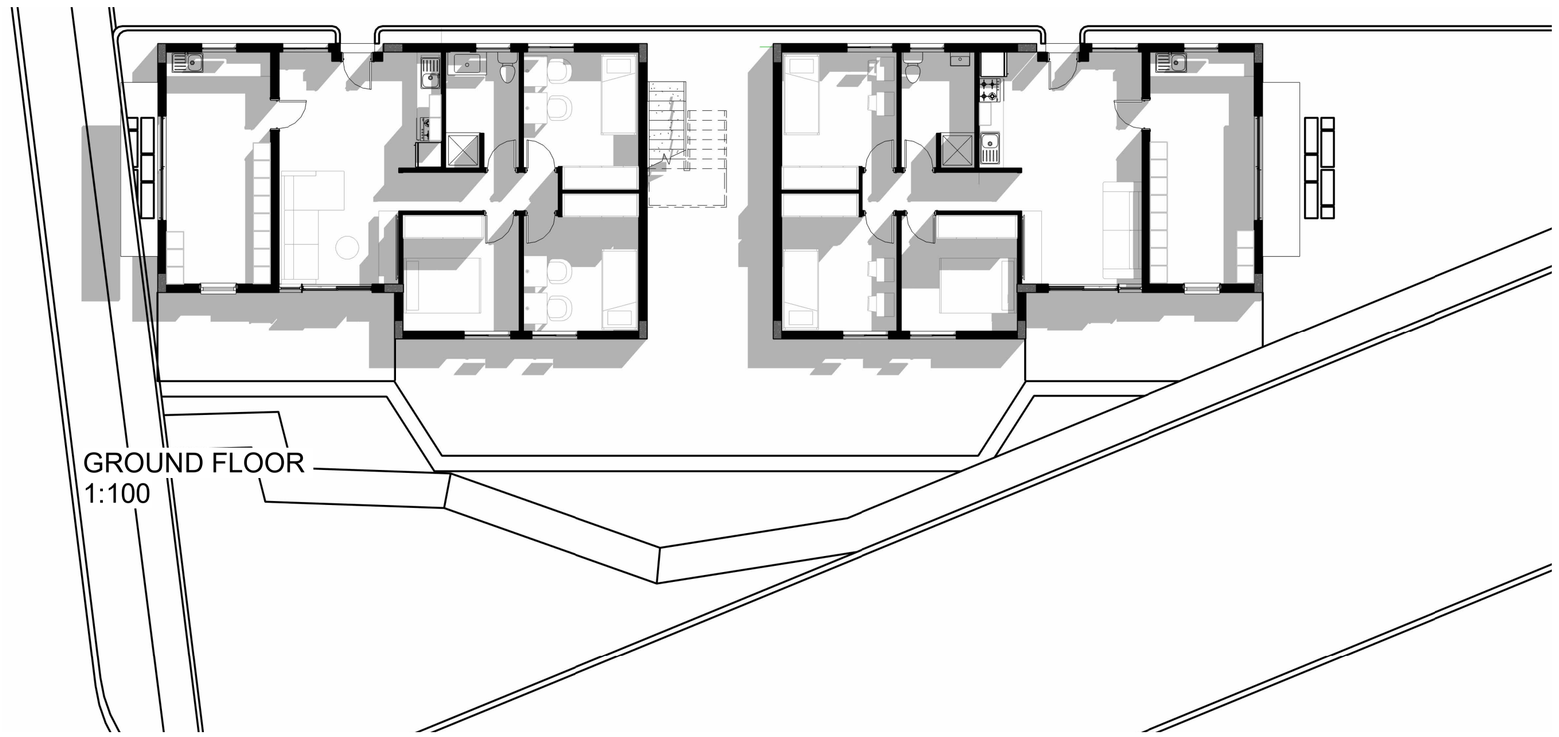

CORE
G.F.
F.F
S.F.


Alejandro Aravena.
Monterry Housing | Quinta Monroy
SHARED SPACE
T.N
B.R
Kitchen
WALK
WALK


MIRROR.
2m
2.5
1.8m
3m
3m
3m
3m
3m
3m
2m
5m
Savage & Dodd
Architects + small houses
ADAPTABILITY OF PARTS
TO THE WHOLE


BIKE
2m
1500





GROUND FLOOR
1:100

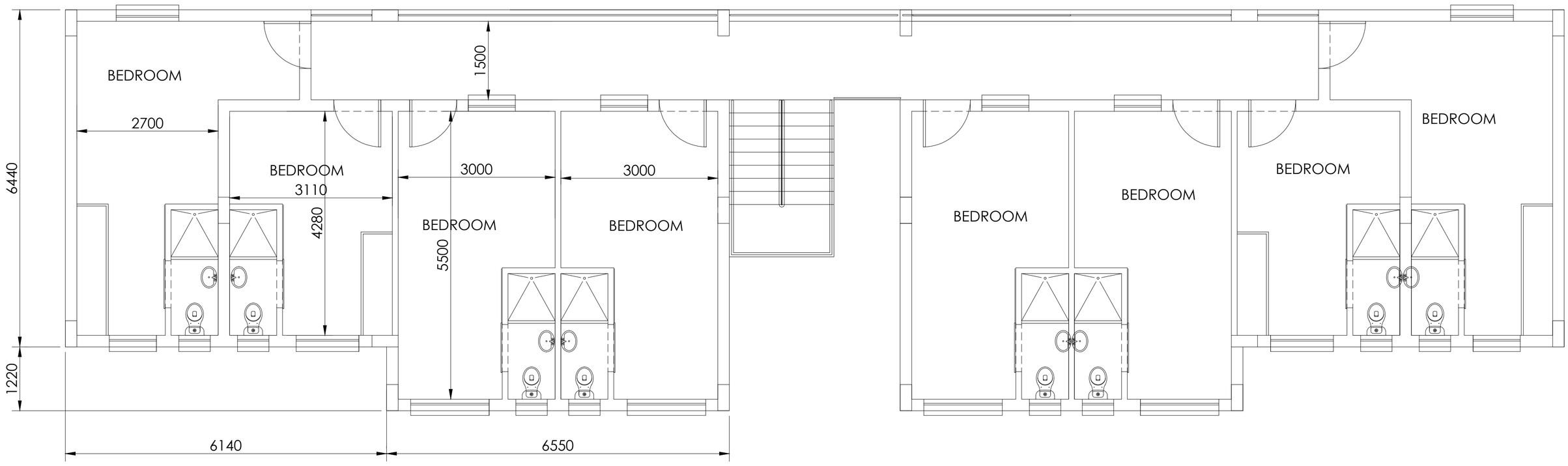


MASTER RESIDENTIAL PLANS

1:100

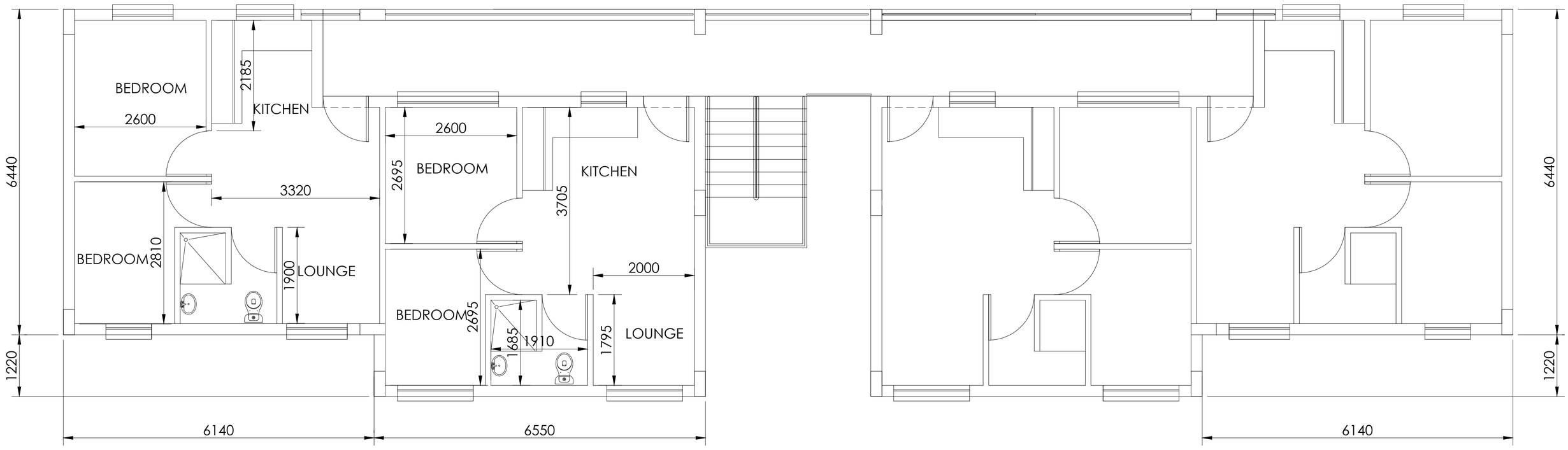


1:100



PROPOSED FIRST & THIRD FLOOR

1:100



POSSIBLE THIRD FLOOR

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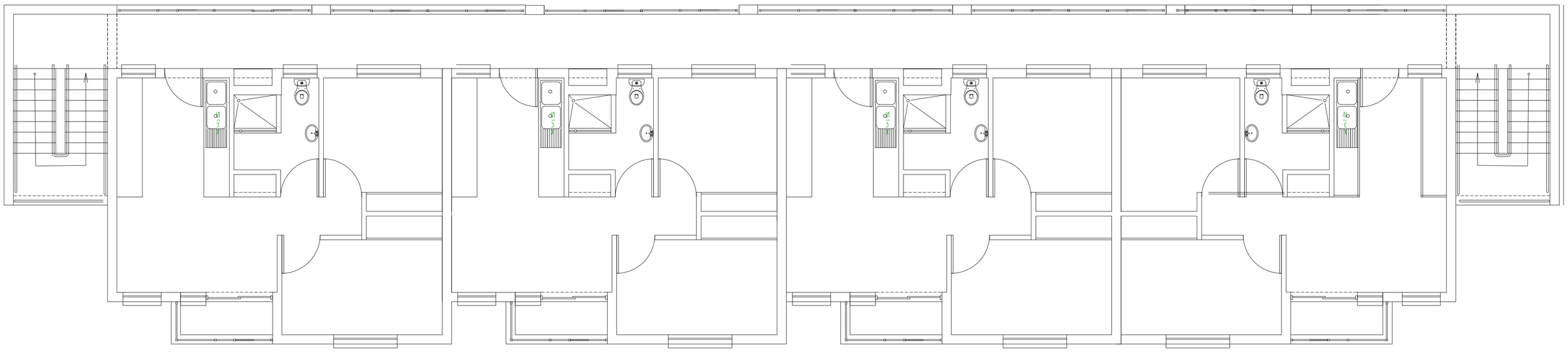
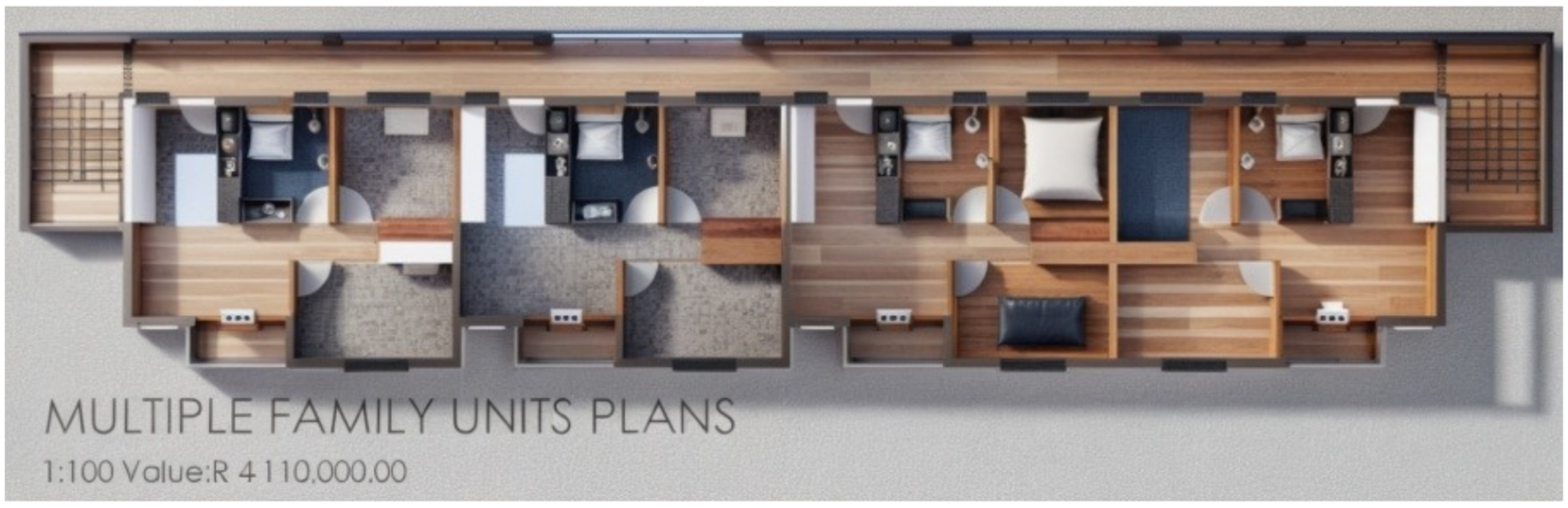
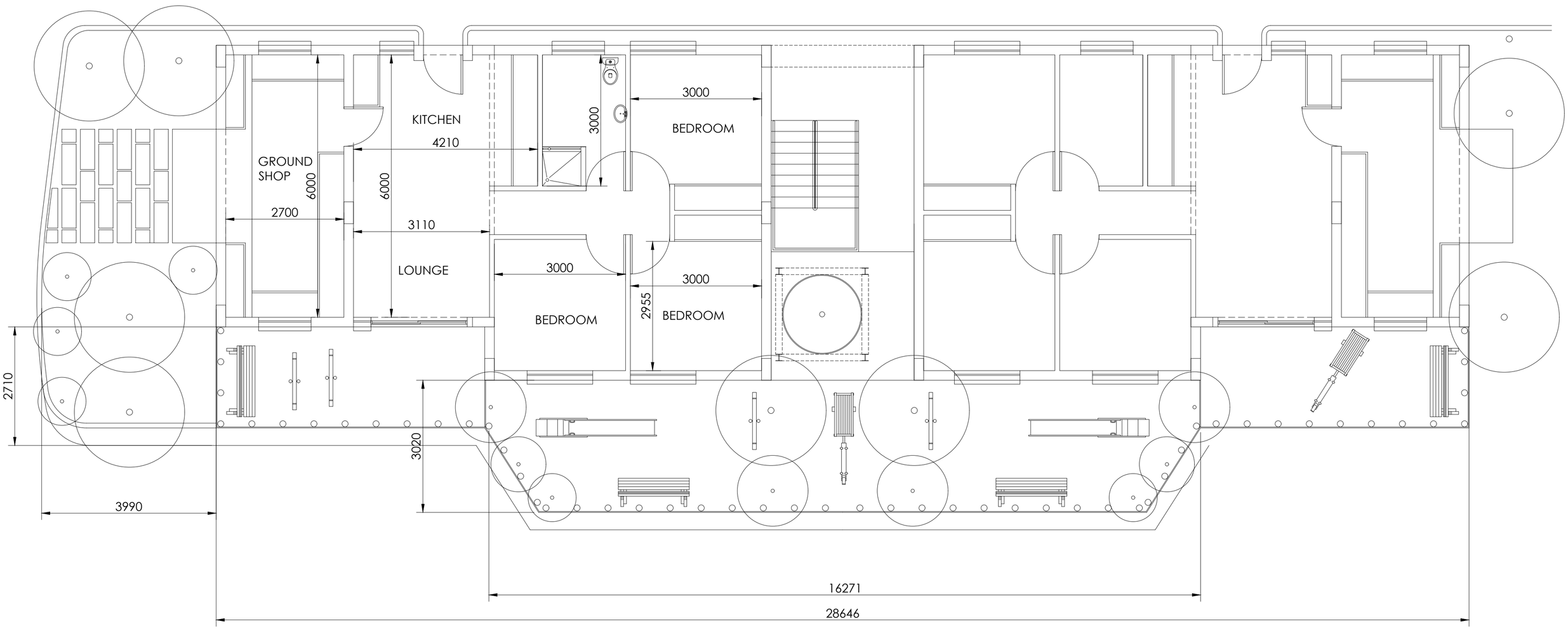


MULTIPLE FAMILY UNITS PLANS

1:100 Value:R 4 110 000.00





GROUND FLOOR

1:100 Value : R 2 130 000.00

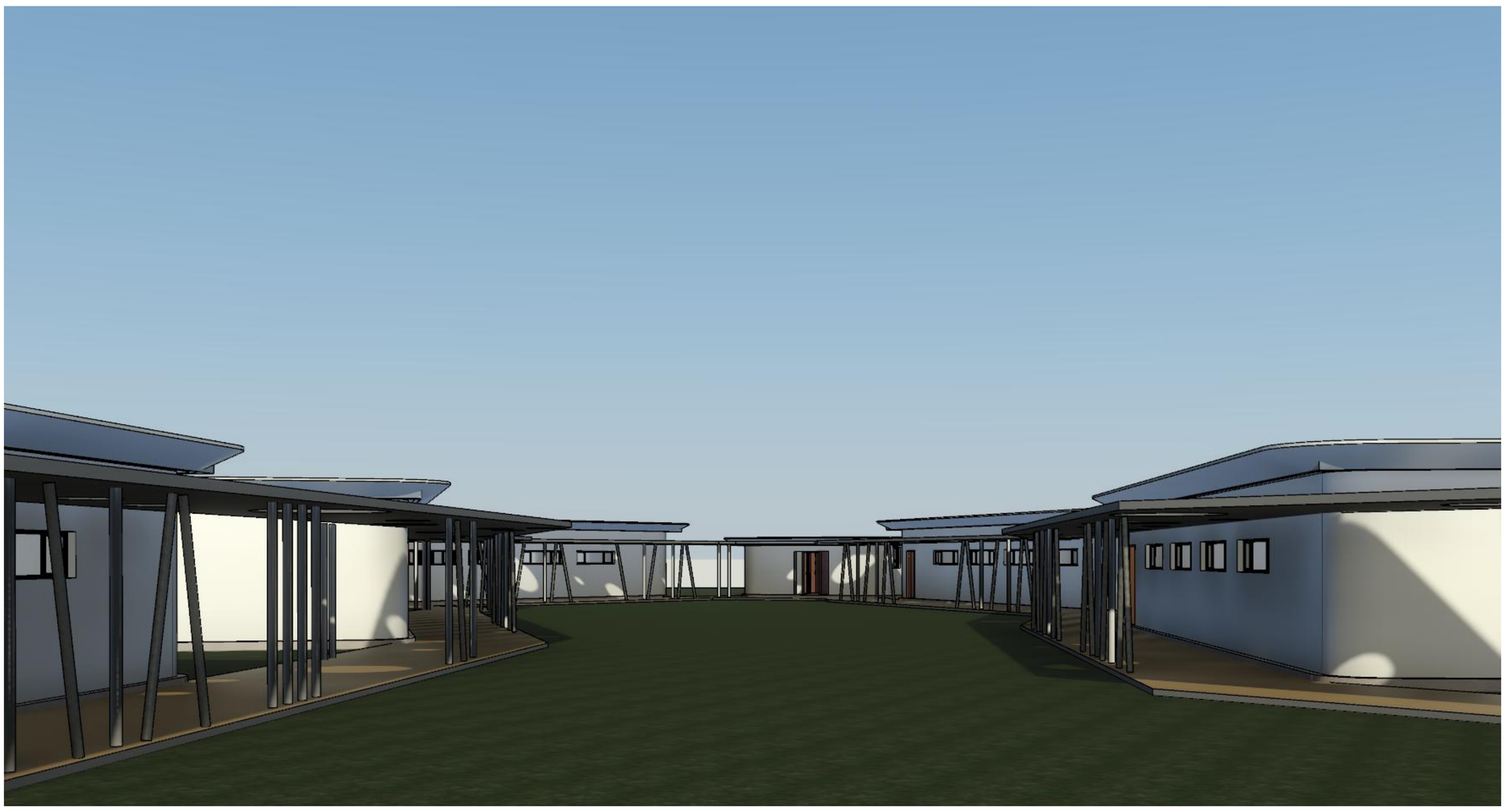


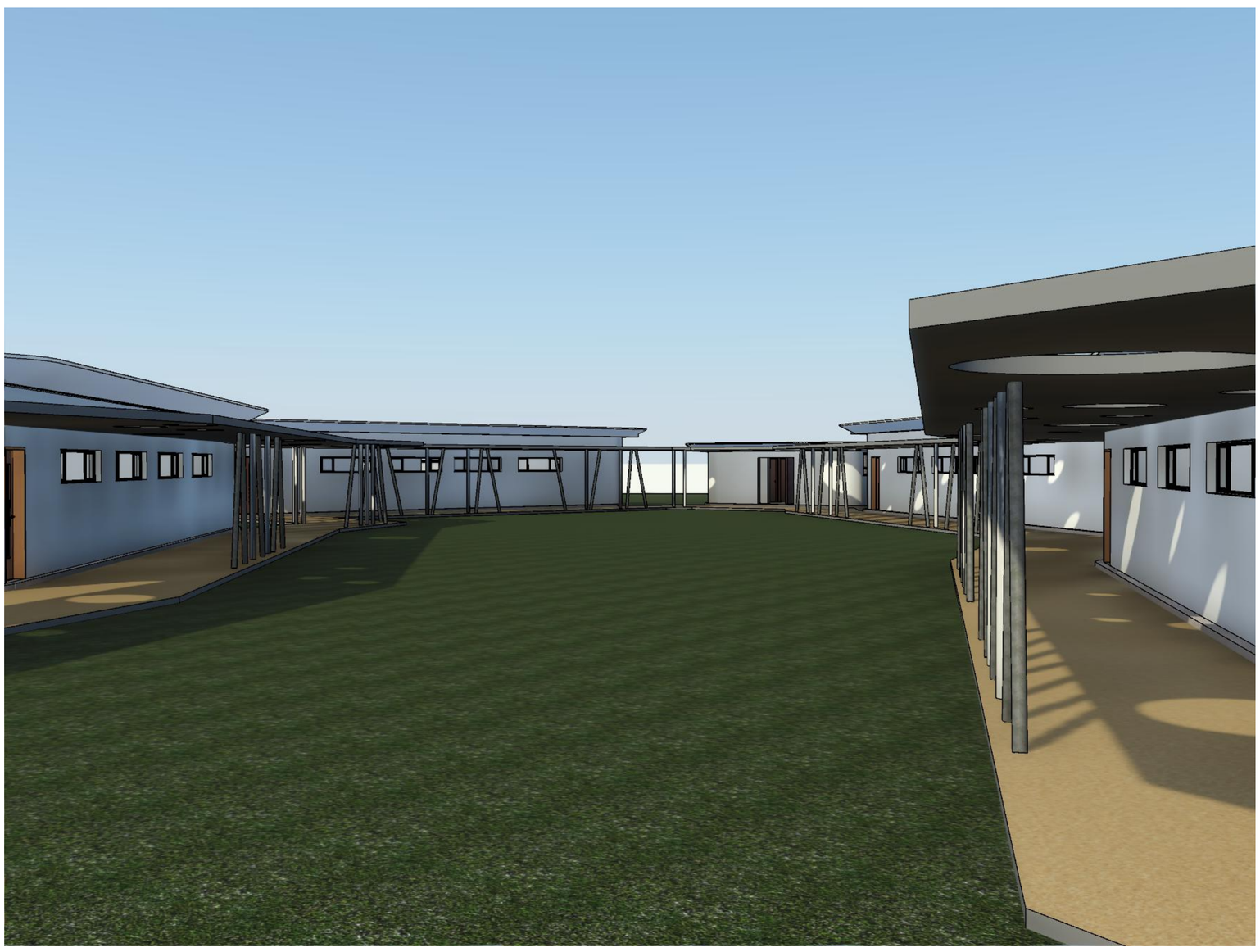


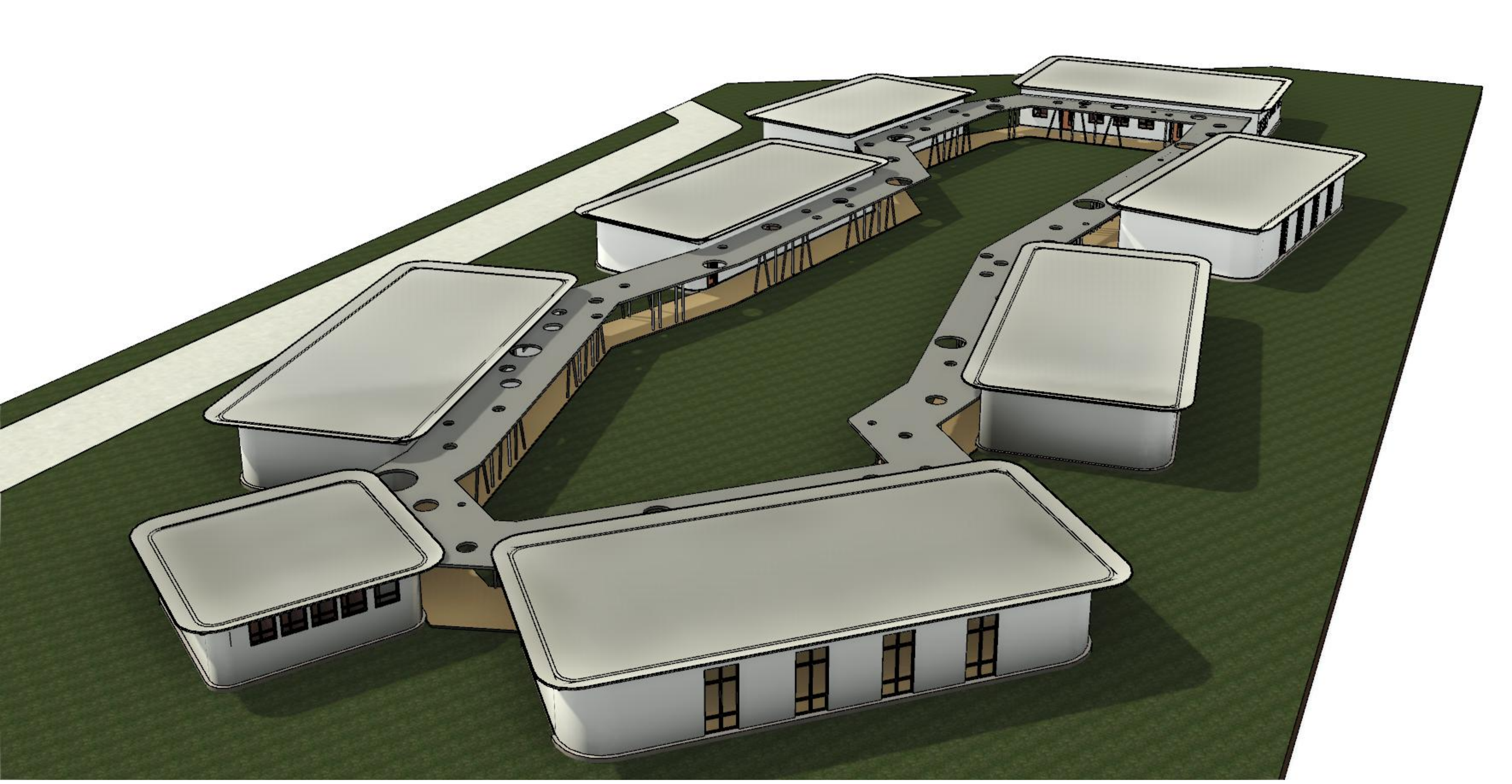




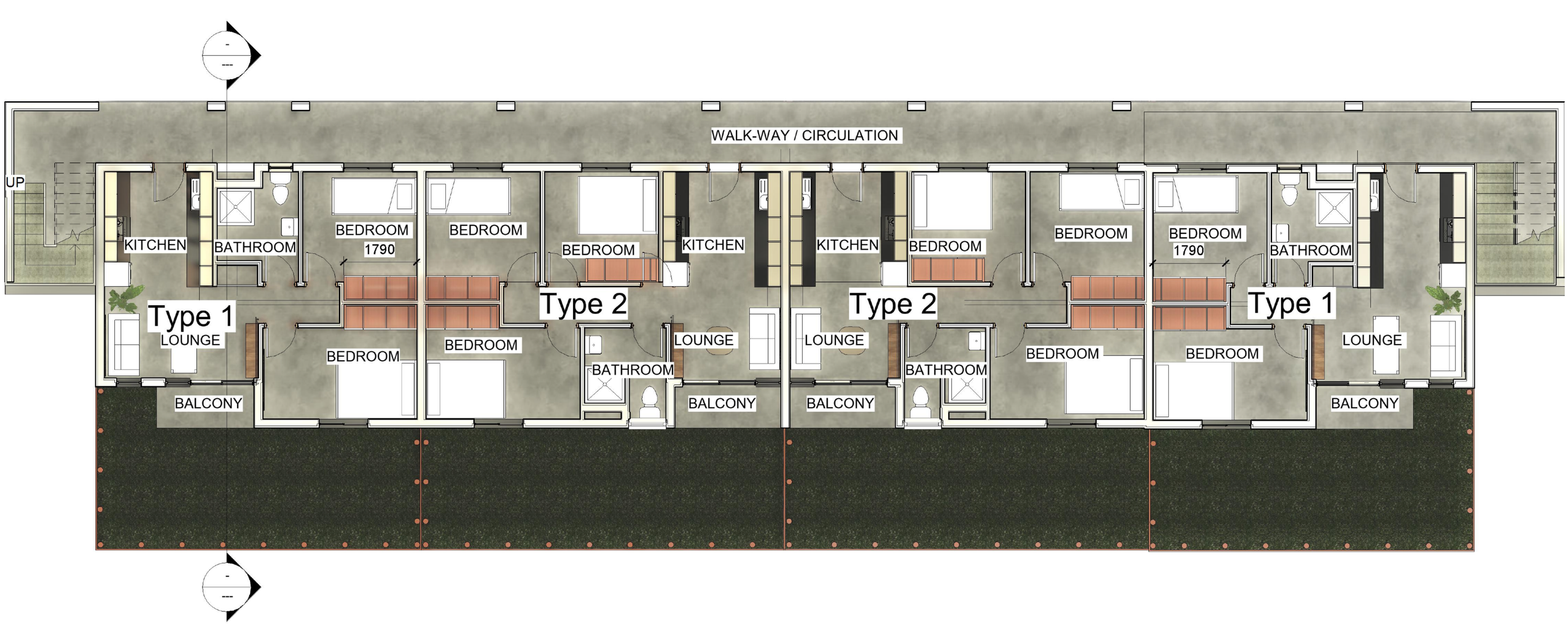
PLAN
1:100





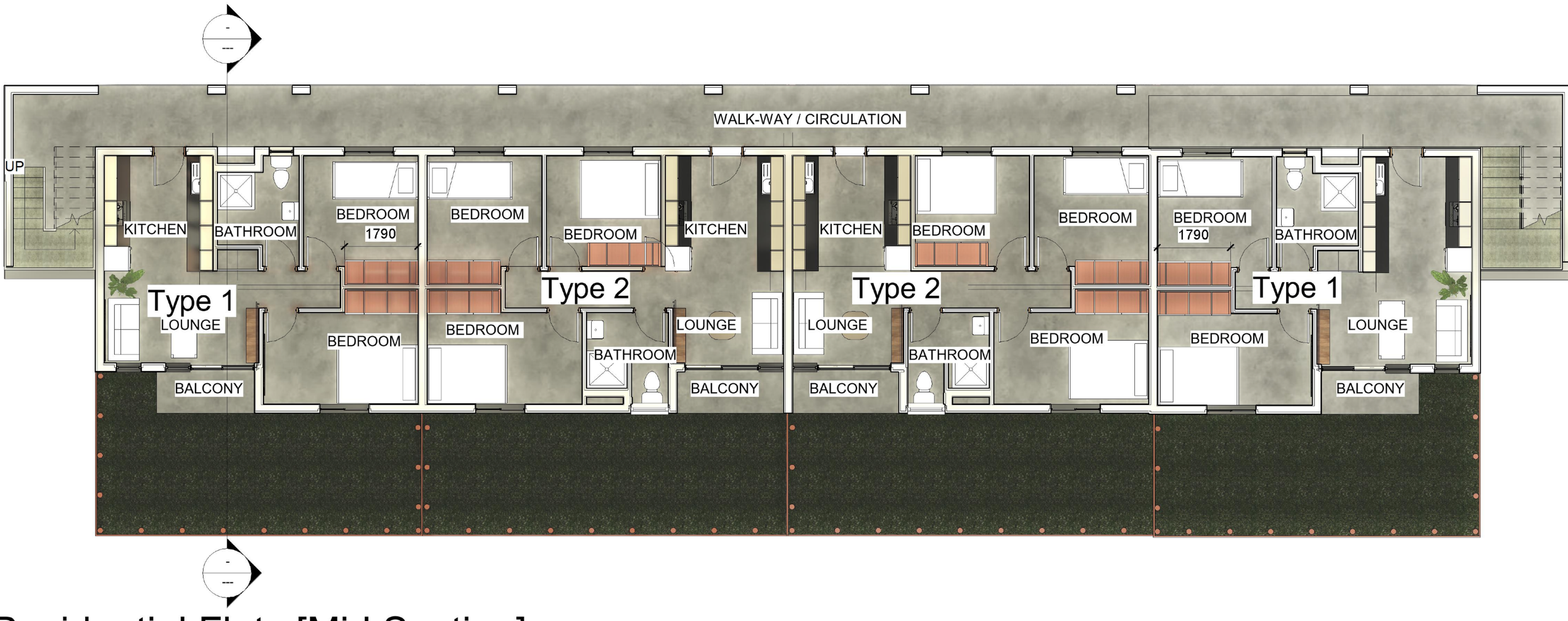






Residential Flats [Mid Section]





Residential Flats [Mid Section]

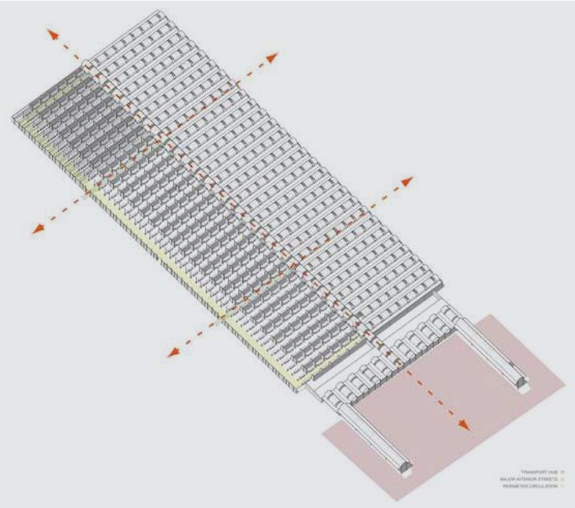


Illus. 34: Photo: Lusaka City Market (Gantner, 2009: 3)

The following precedents are all markets, or market areas, and are intended to glean an understanding of the operation and organisation of the typical African Market.

Spatial Use in an African Market: City Market, Lusaka, Zambia

Simply referred to as the "City Market", the main market in the centre of Lusaka, Zambia (unknown architect) is a large architecturally utilitarian building, covering a full two city blocks. Built in an effort to formalize the previously peripheral market activities around the site, the building consists of a grid of uniform market stalls under a repeating domed profiled-sheeting roof.

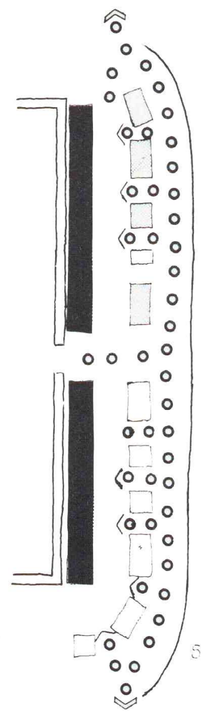


Illus. 33: Lusaka City Market layout, red indicates the transport hub (Gantner, 2009: 3)

The significance of the city market is however, not in the built architecture, but rather in the use of space that becomes clear when imposed over the neutral grid of stalls. With no formal allocation of stalls present, the vendors have been left to arrange themselves within this building as they please, paying the authorities a rental for the stalls that they occupy. This has resulted in the grouping of vendors with identical merchandise into distinctly identifiable areas according to social conventions (Gantner, 2009: 2). This allows vendors some social support and assistance, as well as the ability of self-regulation within these groups. In Lusaka this functional grouping occurs locally on an informal level and on a city scale at a formal level (ibid.).

These groupings may perhaps be referred to as sectors, and benefit the vendors in that they are able to:

- Self-regulate and form representative groups
- Work in mutually beneficial syndicates, co-operative, or buying-groups, and buy larger volumes
- Draw on a larger knowledge and experience base
- Create a known location and larger stock range; and consequently a larger customer draw



Illus. 49: Some stalls survive by 'intercepting customers who are drawn to stalls behind them (Dewar & Watson, 1990: 42)

Market Levels

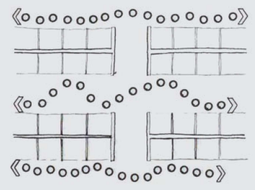
There are also different market levels within the sectors with vendors operating at different levels of formality, from the mobile pavement trader to the enclosed market shop. Vendors at lower levels may not want to change levels for business reasons (Personal Correspondence, 11 July 2011).

Equality in the Market

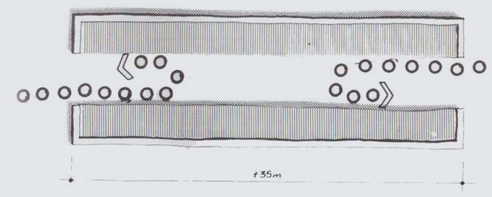
The self organization of market social structures means that these organizations are fairly democratic. Vendors stalls seem to be fairly uniformly sized and distributed where stalls of the same sector and level are grouped, with the main size change being across market levels. Smaller less formal stalls seem to be closer to faster moving pedestrian traffic.

Theoretical Guidelines

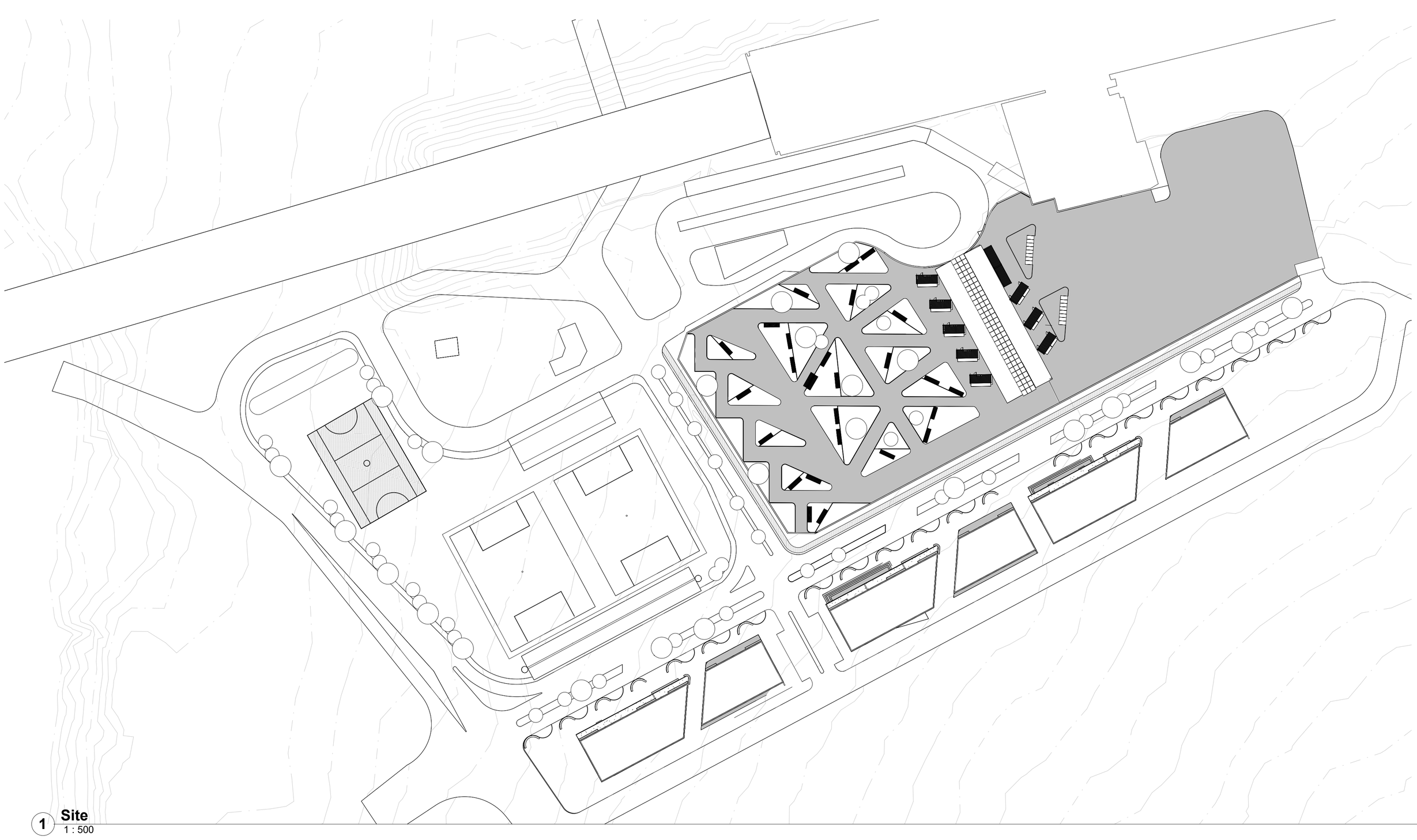
The following illustrations describe the general situations found in the studied markets, and confirmed by the research on African and International markets by Prof. David Dewar and Vanessa Watson (1990: 42-53)



Illus. 50: Dead spots caused by end walls (Dewar & Watson, 1990: 49)



Illus. 51: Ineffective customer penetration, due to stall run being too long, ie. +35m (Dewar & Watson, 1990: 50)

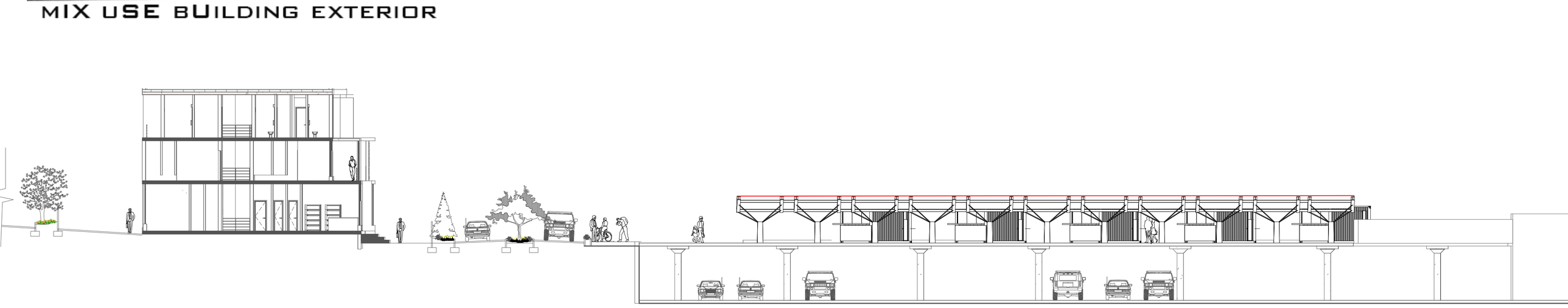


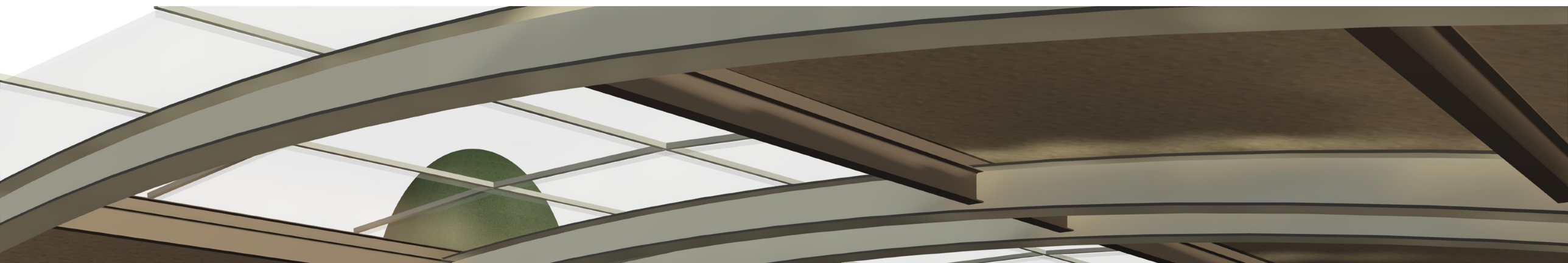
1 **Site**
1 : 500


2
3
4
5



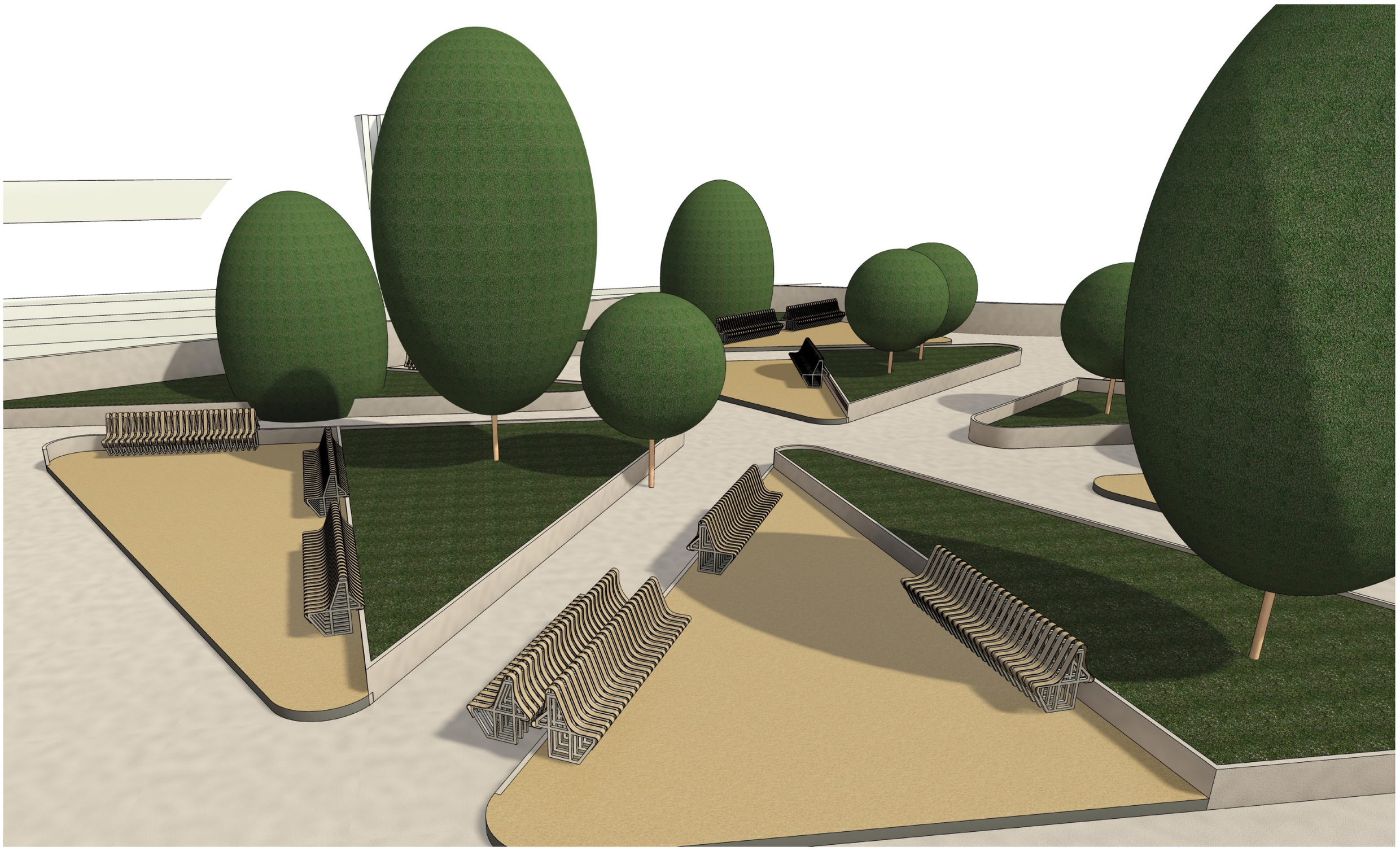
MIX USE BUILDING EXTERIOR

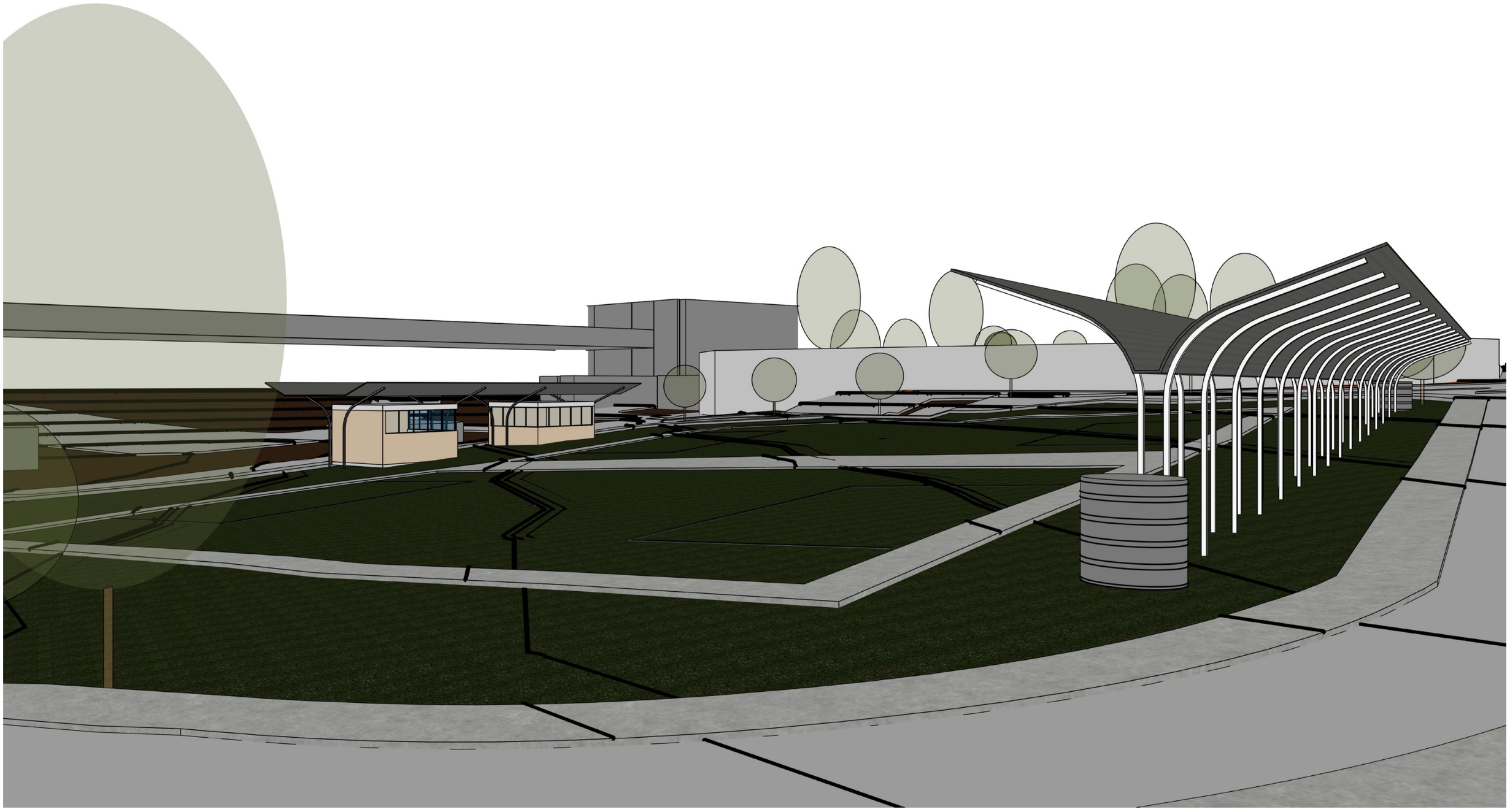


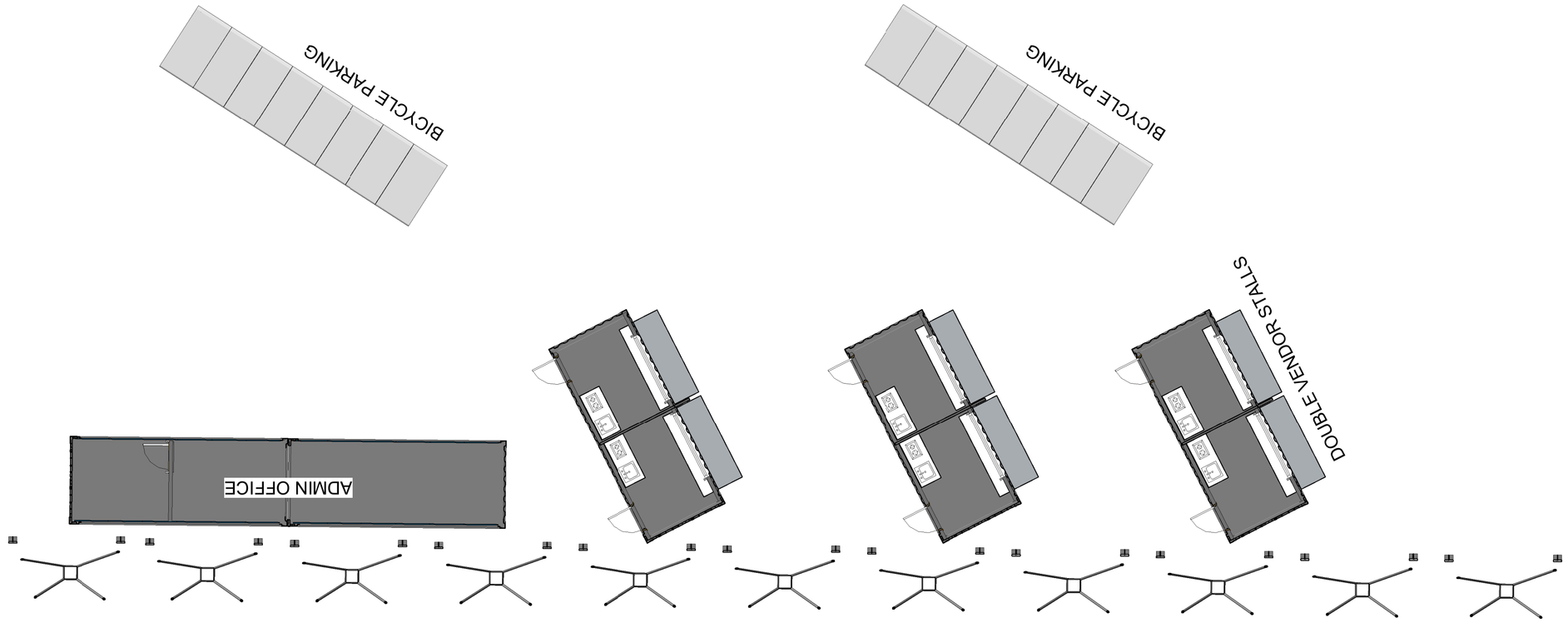


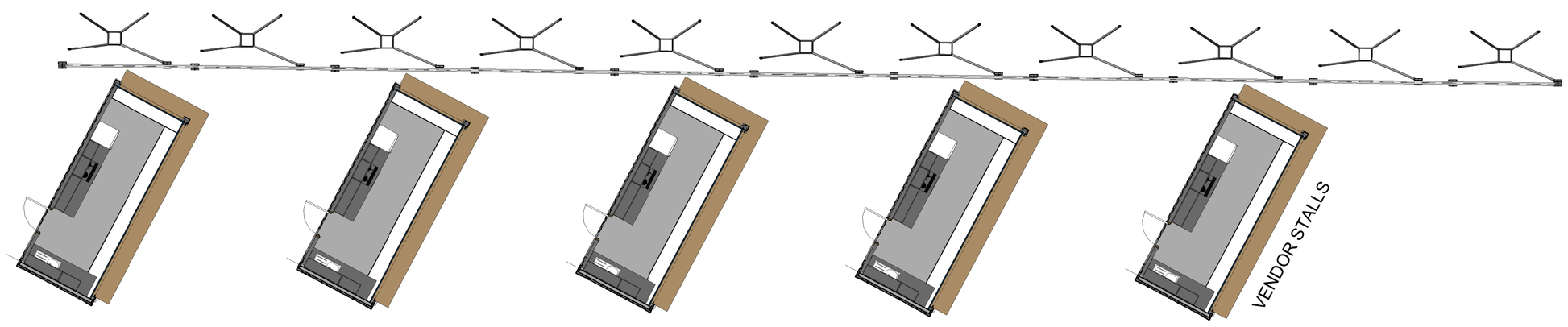









BICYCLE PARKING
BICYCLE PARKING
DOUBLE VENDOR STALLS
ADMIN OFFICE


MARKET WALK WAY
VENDOR STALLS

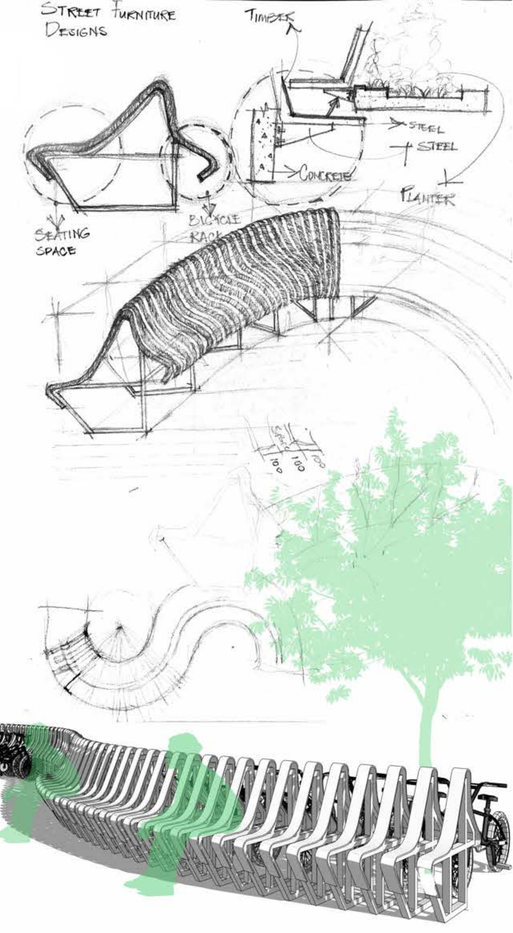


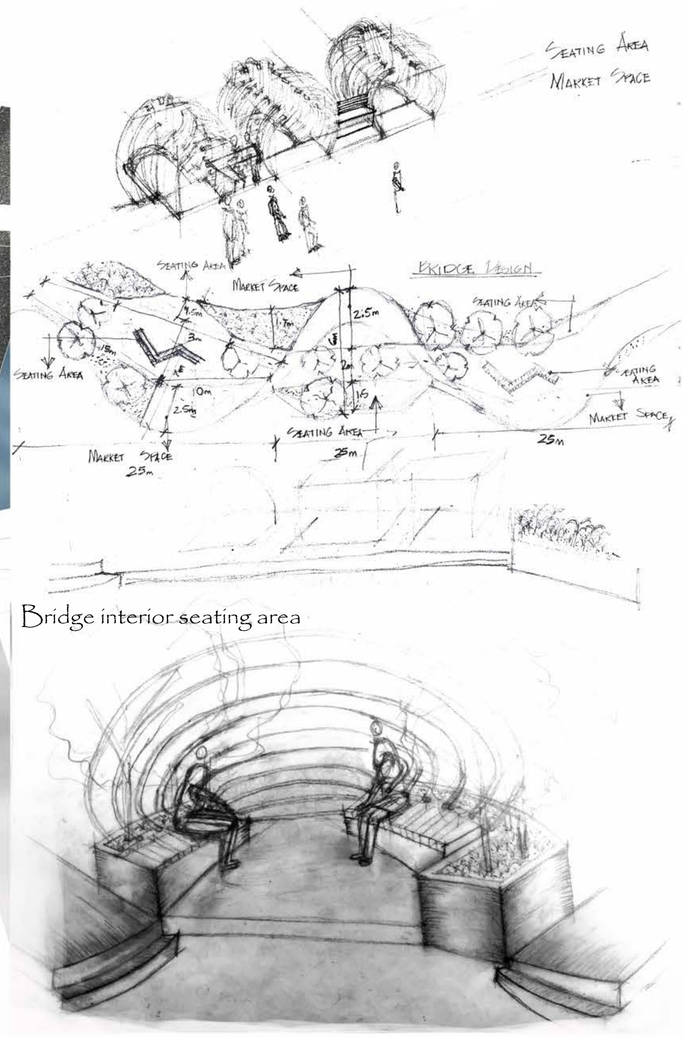

1902
1488

MASTER PLAN

LEGEND:

1. Seating area(designed street furniture)
2. Market space
3. Prayer space
4. Wetlands
5. Pavillion
6. Juskei River
7. Bridge
8. Malboro Drive
9. Malboro Railway Line
10. Fruit & vegetable orchard
11. Proposed Road

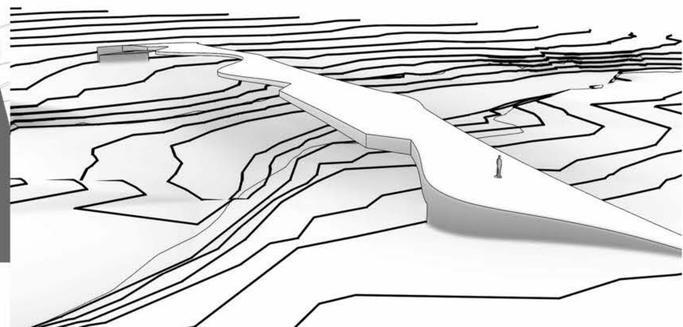




Bridge floor plan

Bridge interior seating area

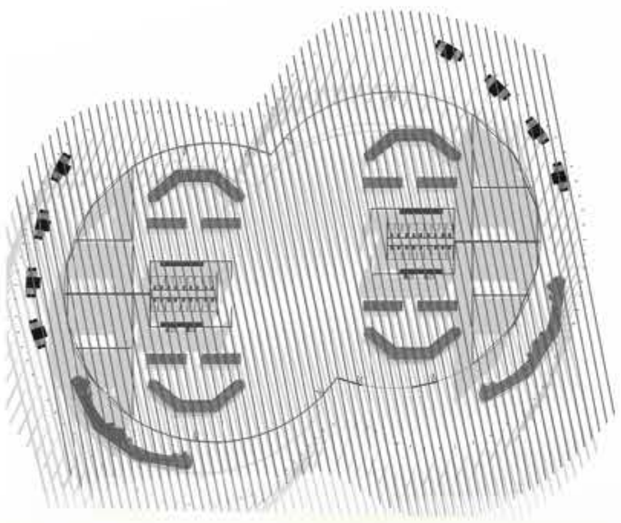
Bridge arial view



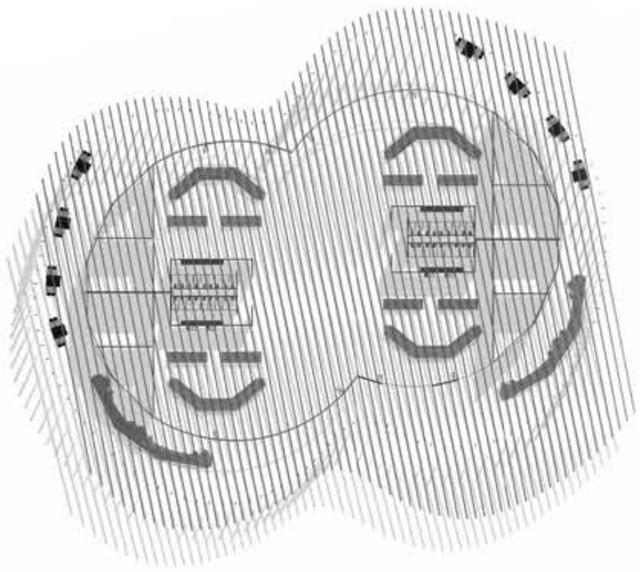
Scale 1: 200

URBAN DESIGN

Market Design



Ground floor plan



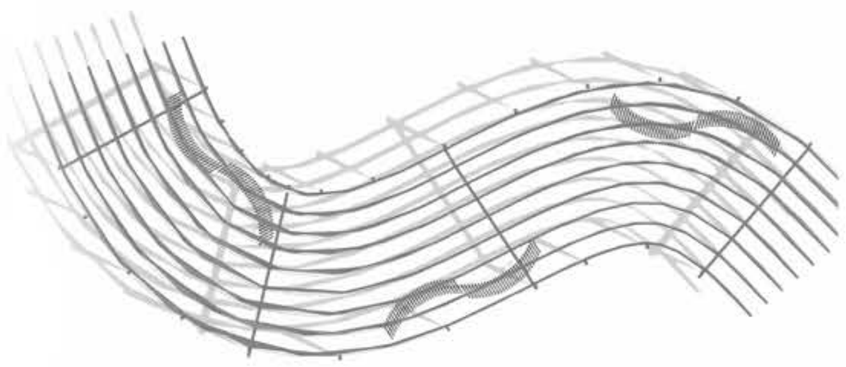


Perspective of market space

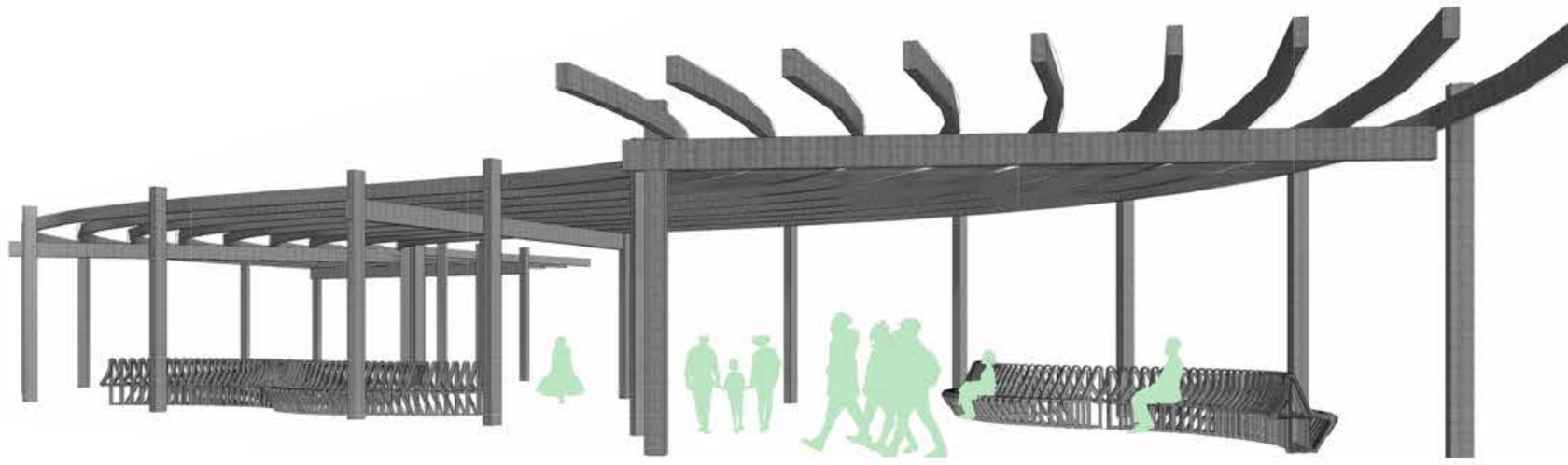


Section of market space

Pavillion Design



Ground floor plan

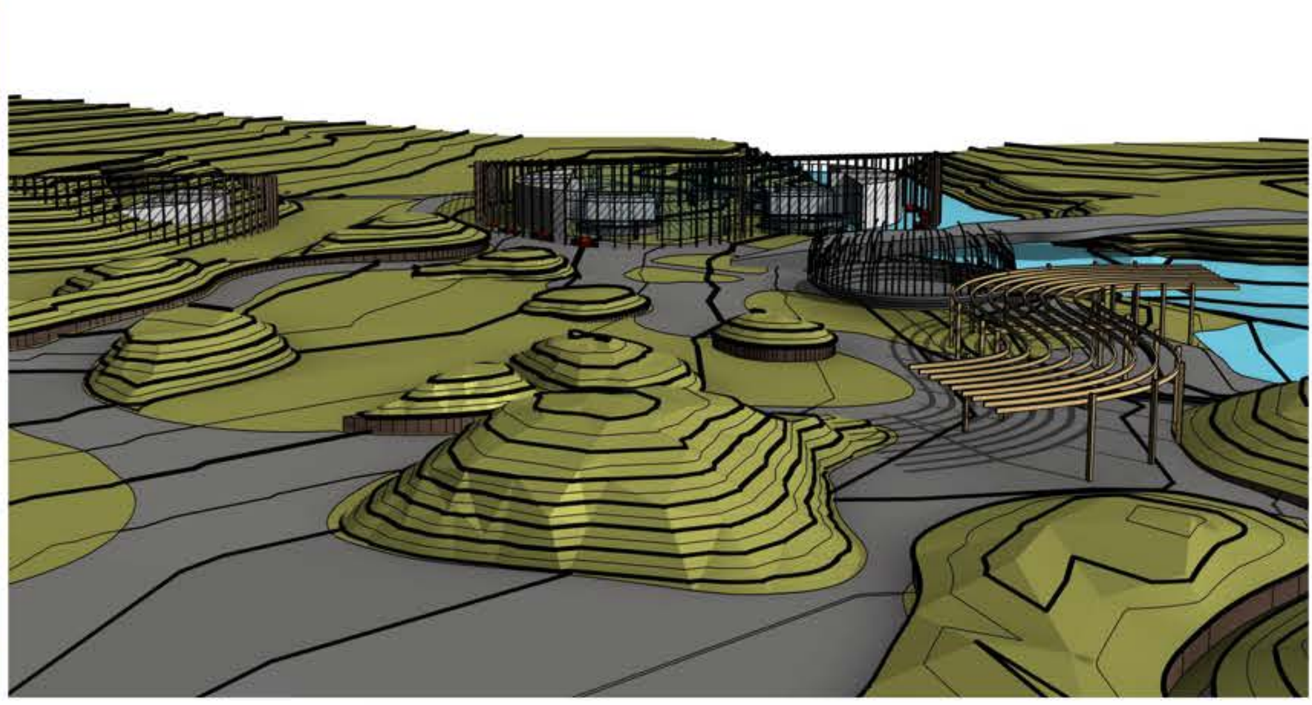


Perspective of the pavillion

Rendered Proposals



Perspective of market leading to the Malboror train station



Perspective of landscape showing the market and the pavillion spaces

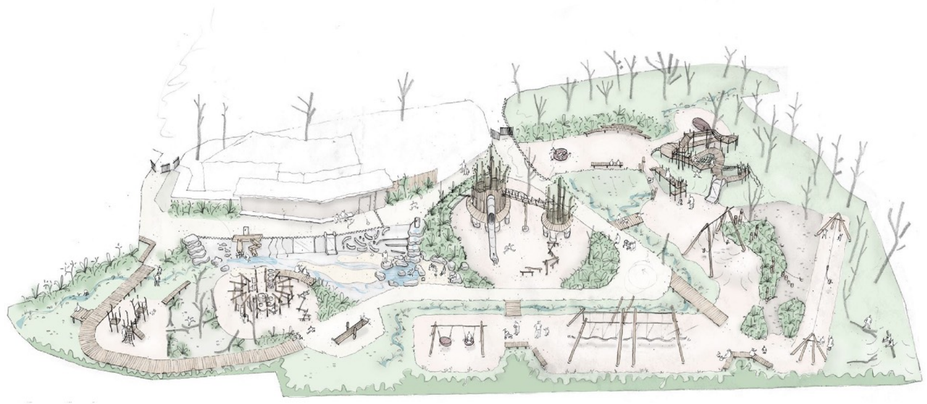
Children's Playground-Holland Park Playground



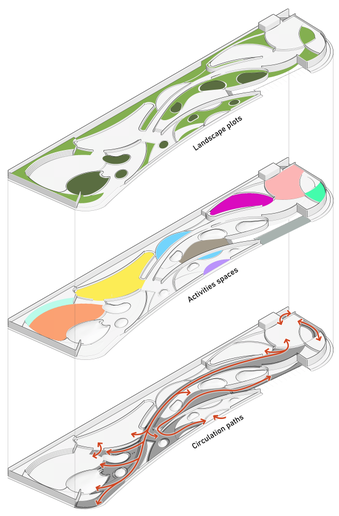


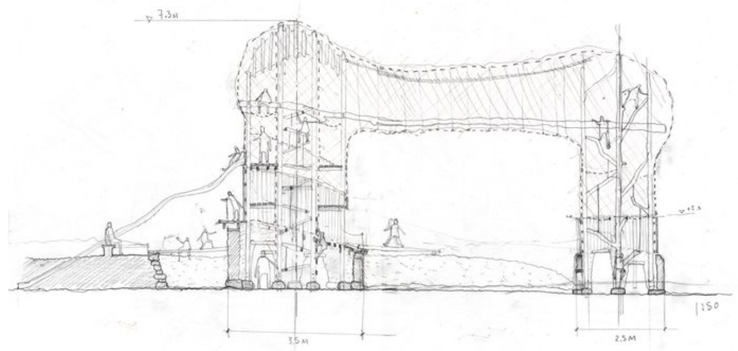
A textured bank and play valley offer sand, waterplay and motoric play for younger children with adjacent areas for parents to relax.

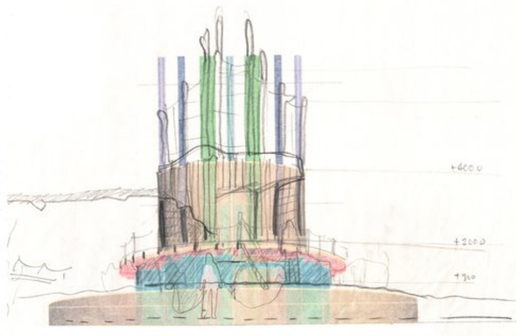
use of sustainable urban drainage systems to create a playground that comes alive when it rains. Surface water is channelled from high level retention basins towards a play valley in the centre of the site.



The outlines of the site are curvy that simulate the offset of nature lines coming by it's organic topography. In this way, people can experience more exciting paths and make them see every corner while they are walking.
With sloping lawn which evoking the image of natural hills, people will feel more integrated with nature.







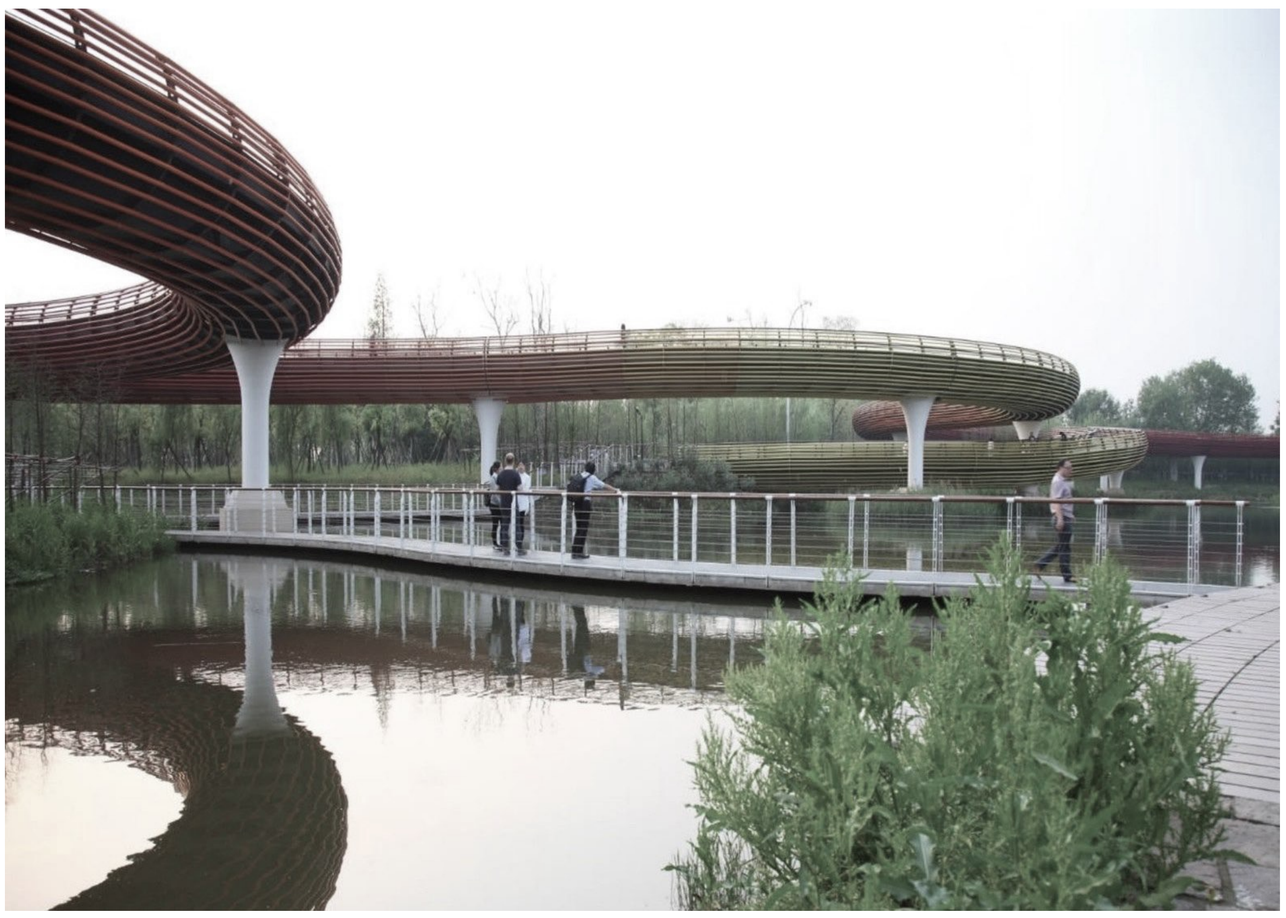


Axonometric view



COMBINING ECOLOGY RESTORATION WITH THE INTRODUCTION OF NEW INFRASTRUCTURE TO CREATE PUBLIC SPACES





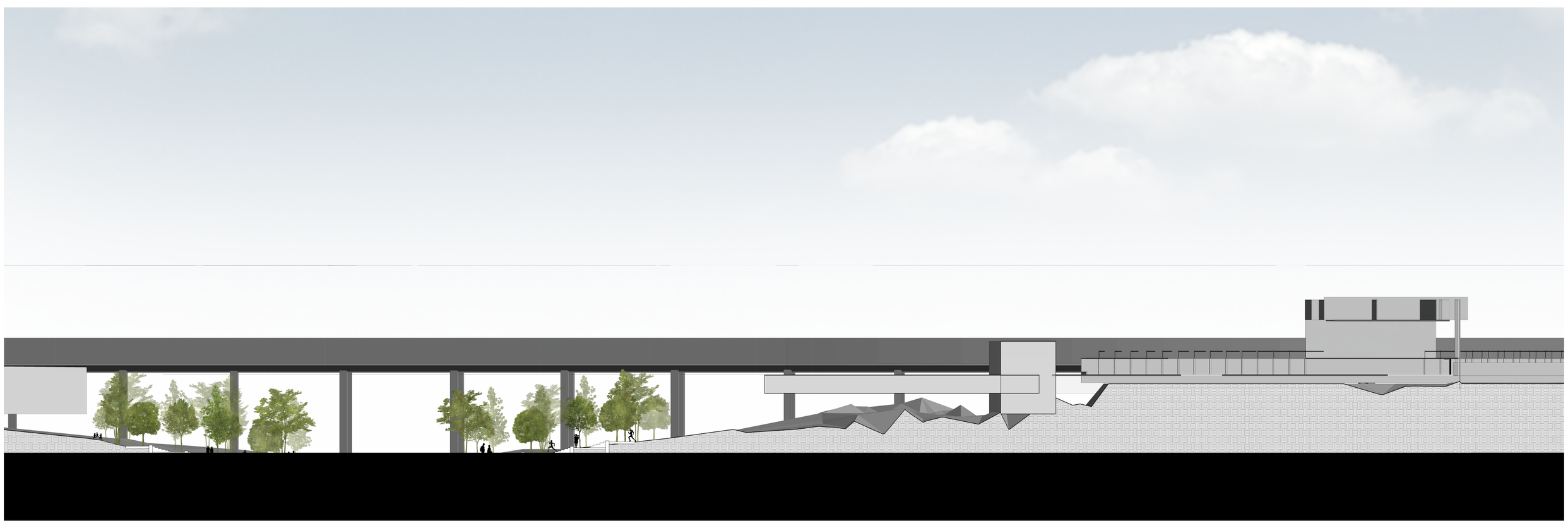


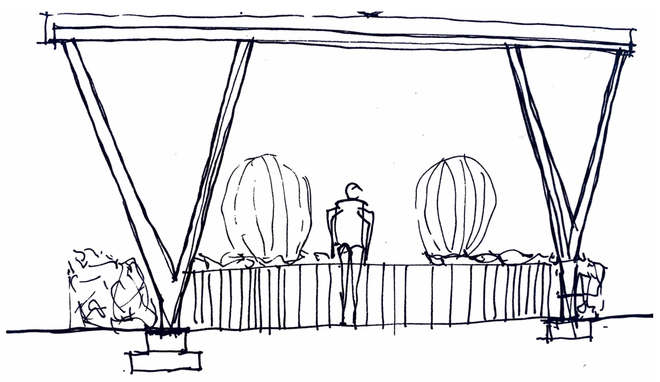


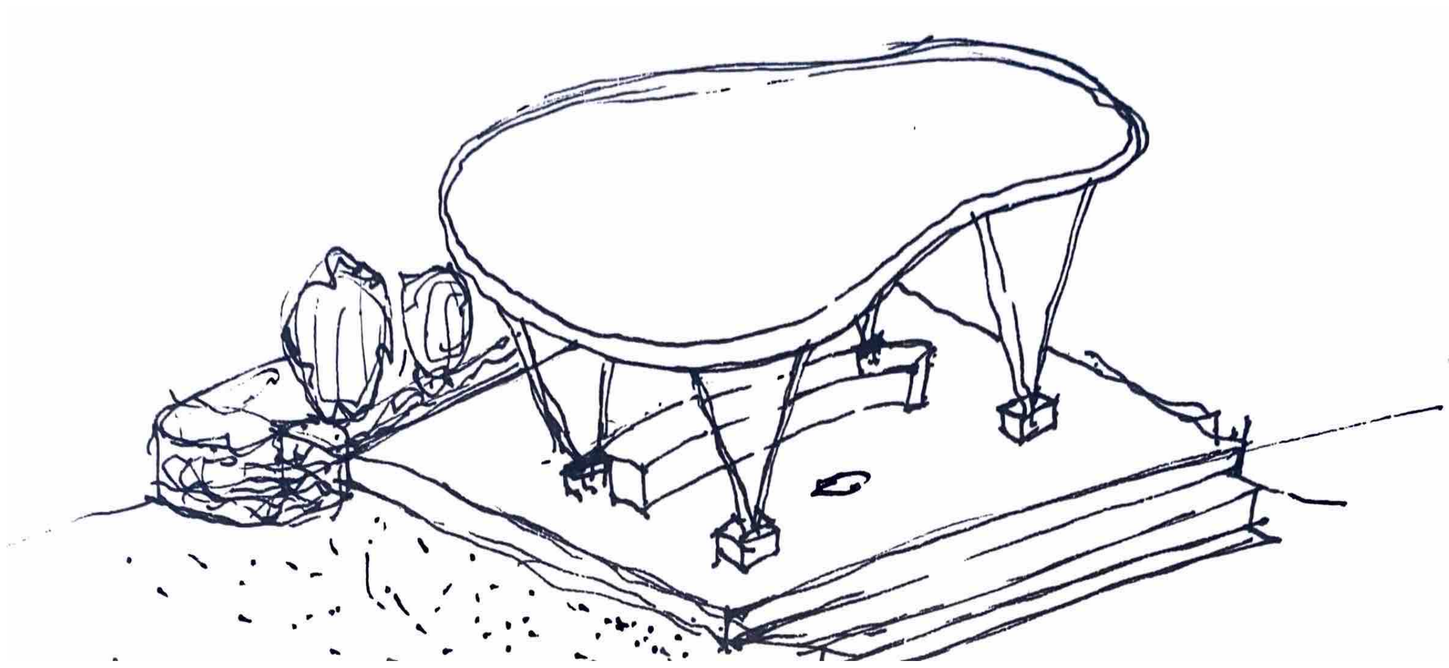




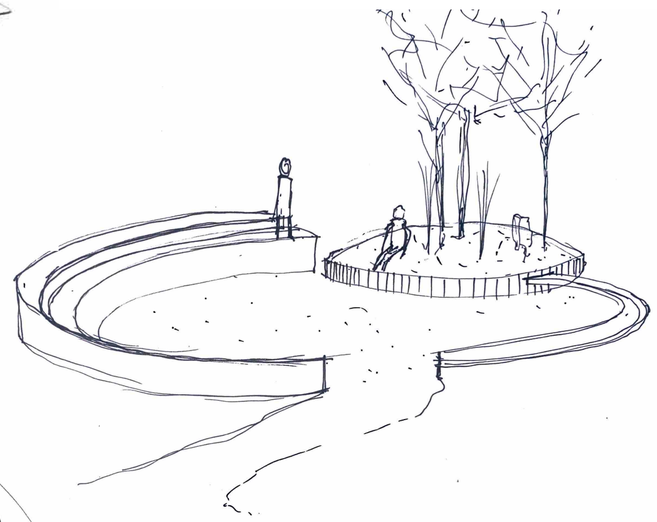








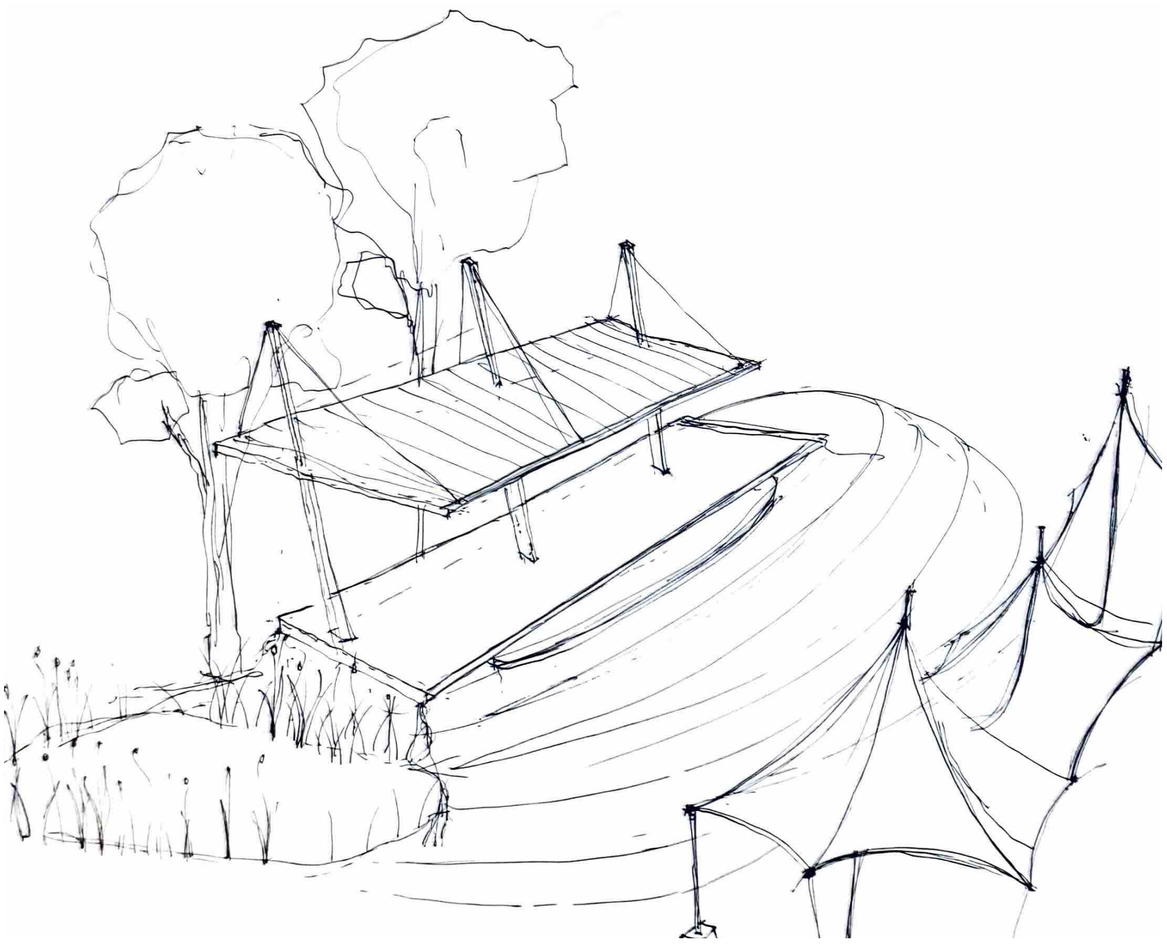


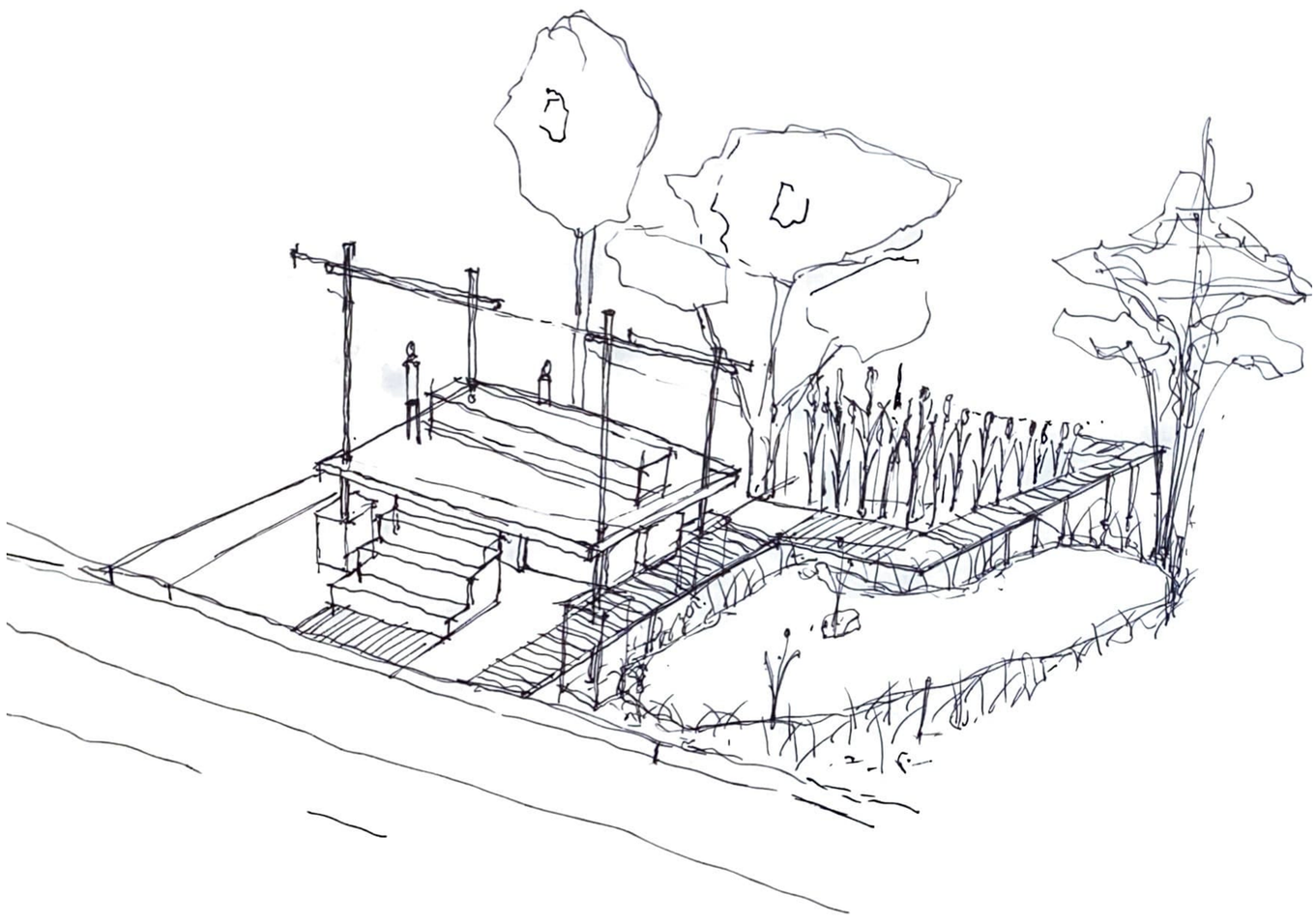


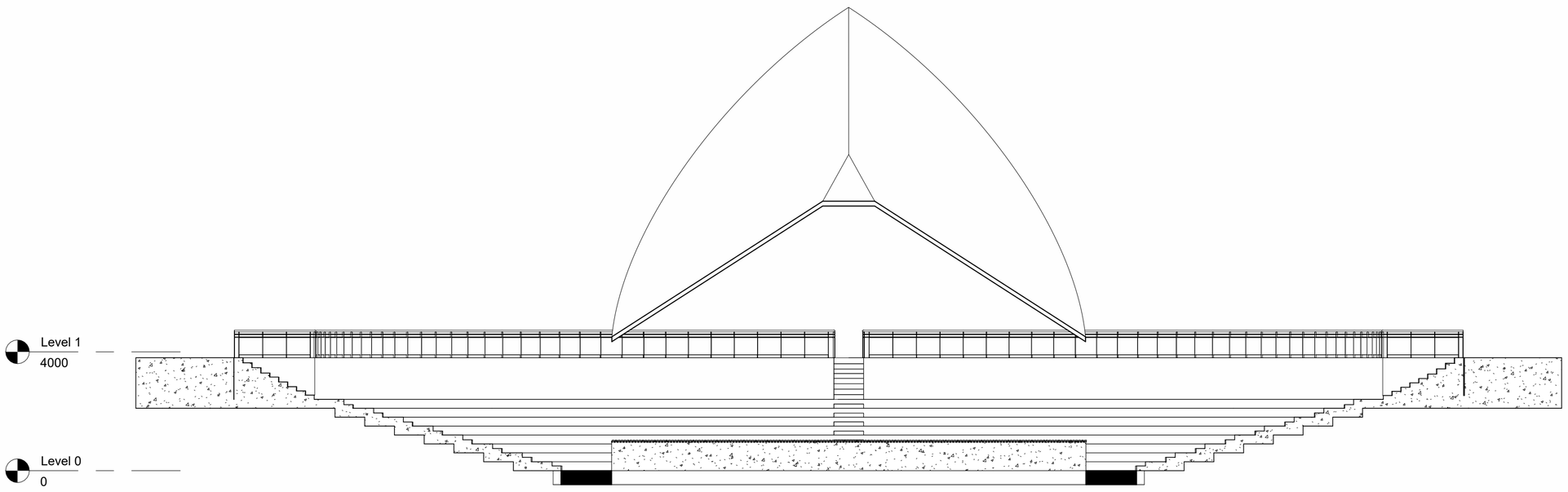




COMBINING ECOLOGY RESTORATION WITH THE INTRODUCTION OF
NEW INFRASTRUCTURE TO CREATE PUBLIC SPACES







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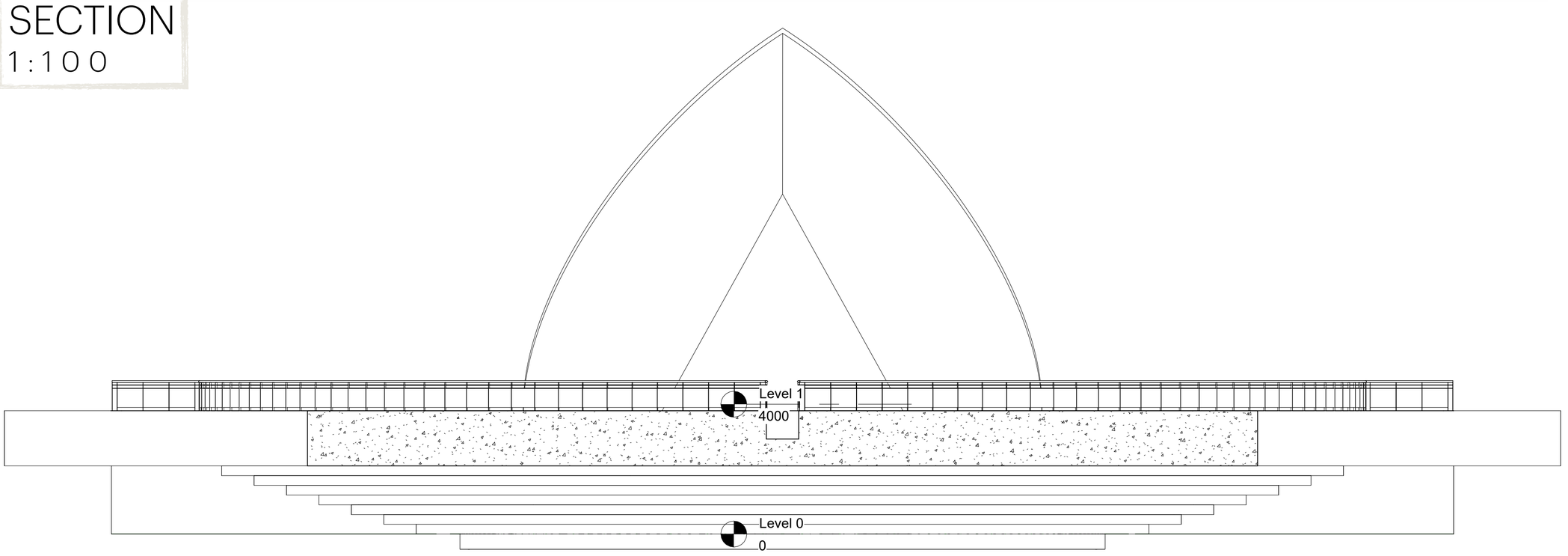

NORTH ELEVATION
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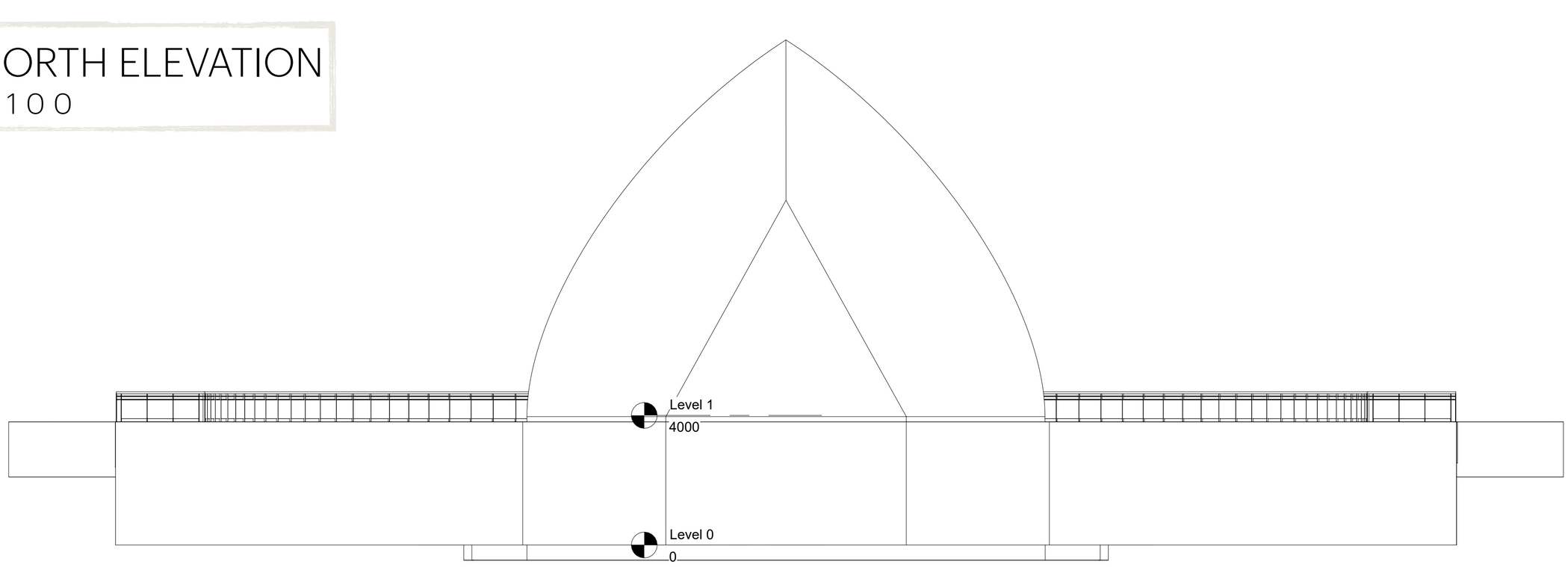

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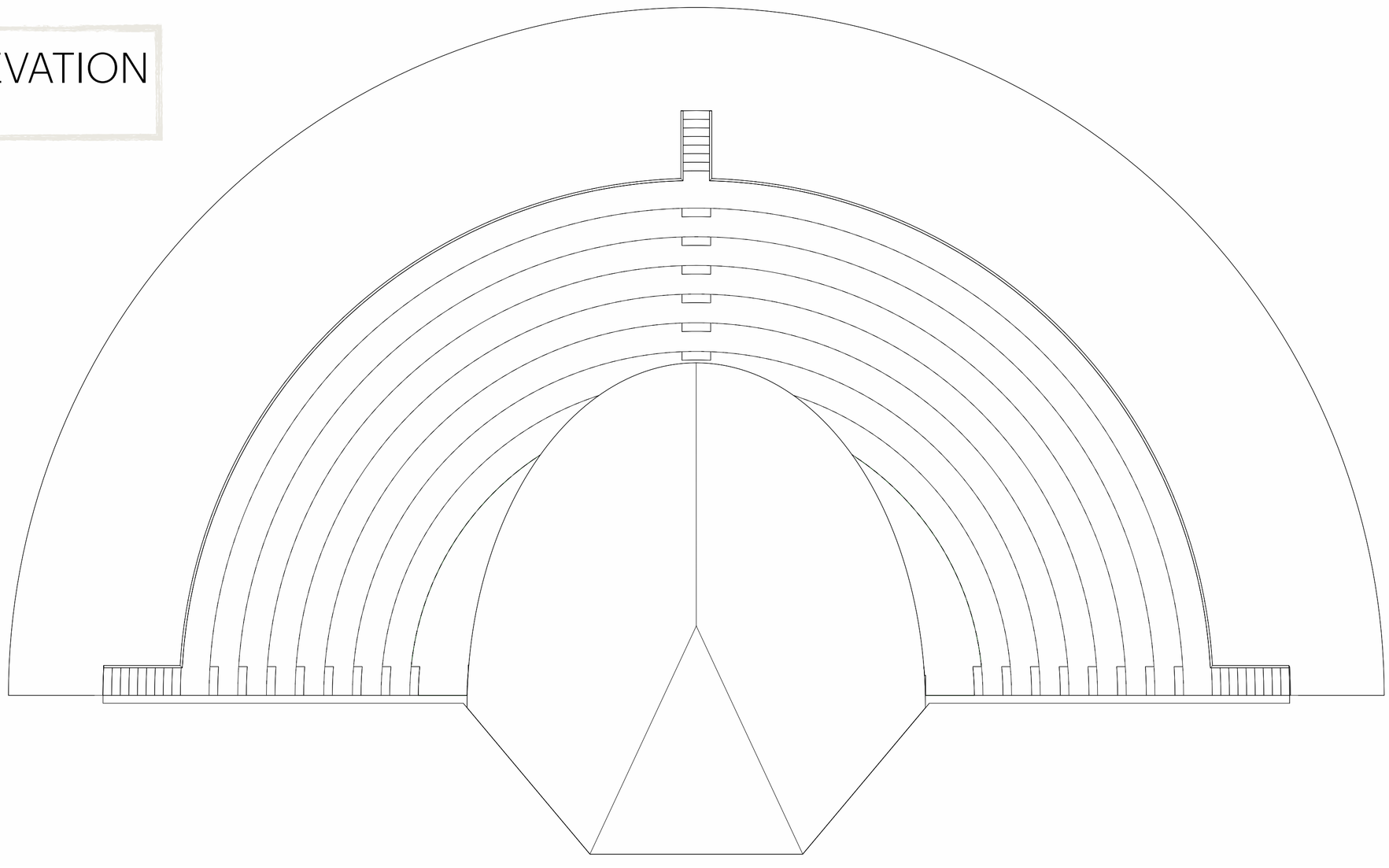

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1:100


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Level 0
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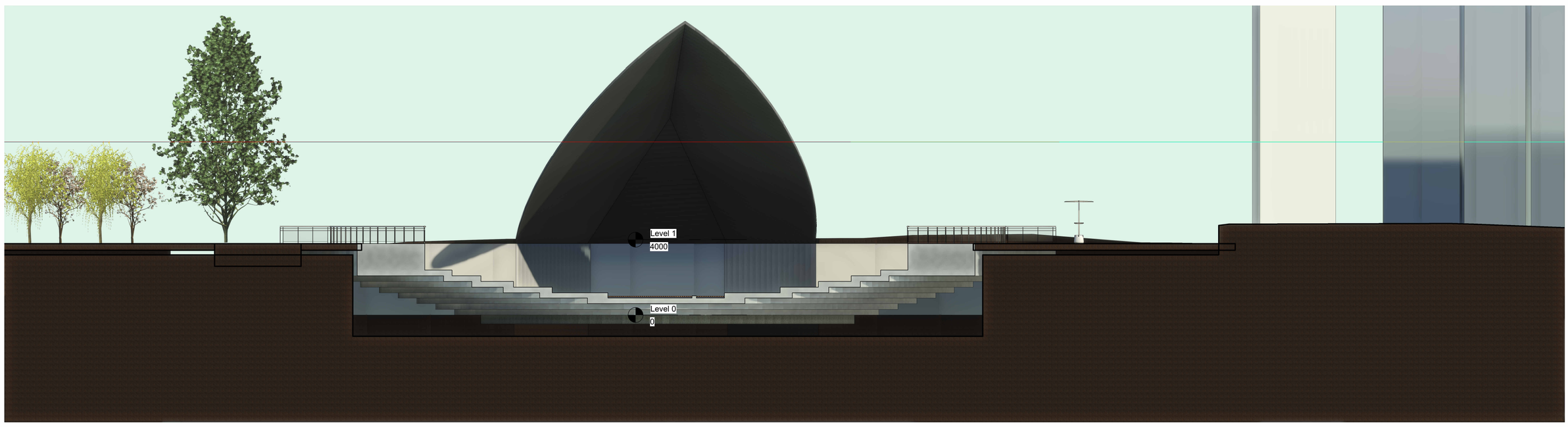
Level 1
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Level 0
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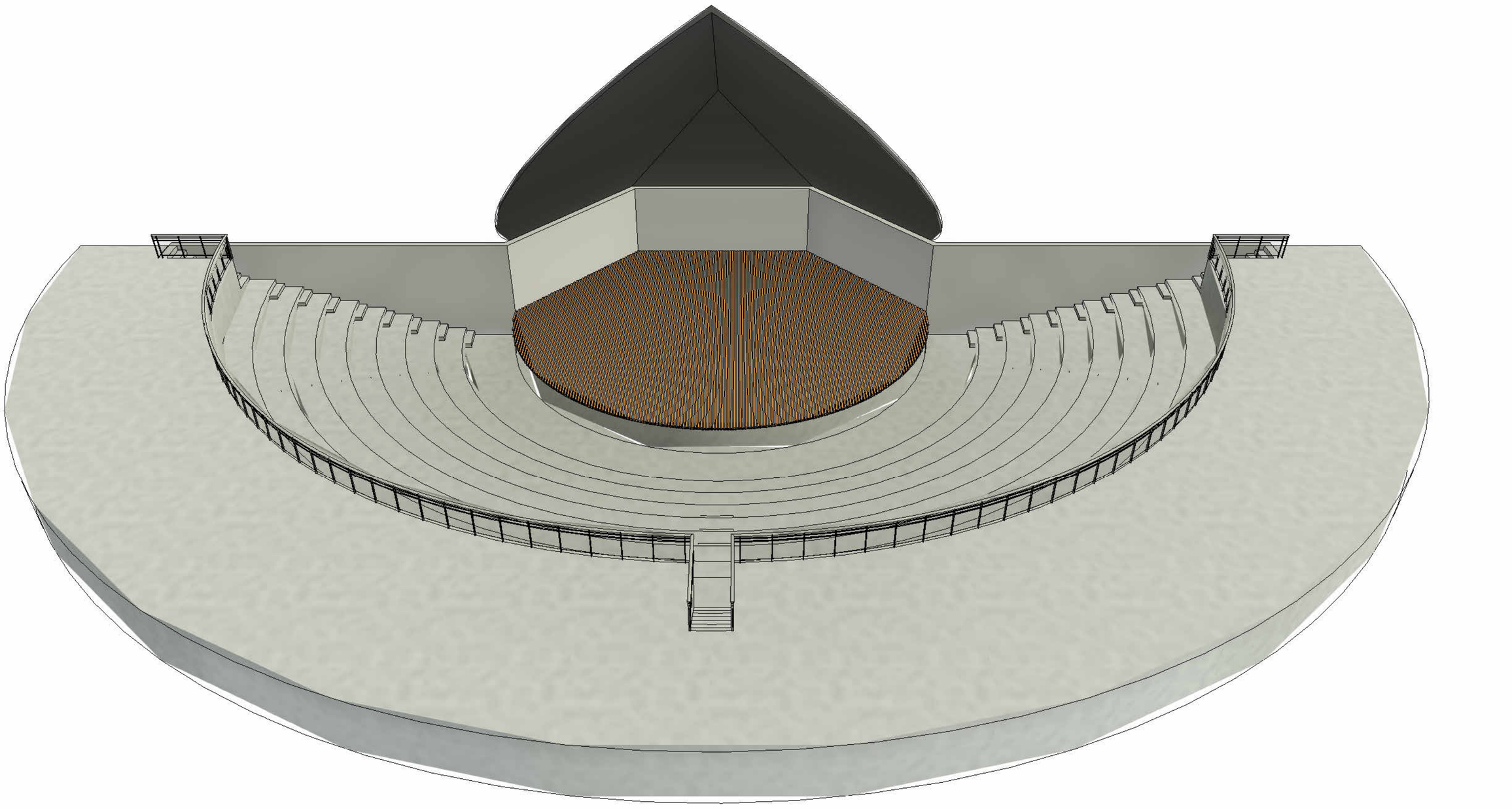

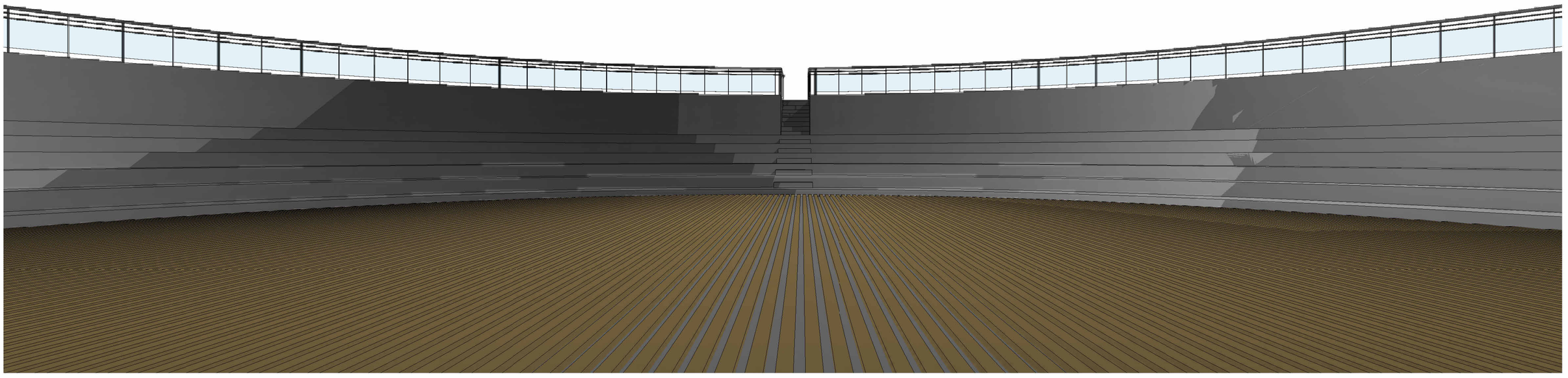

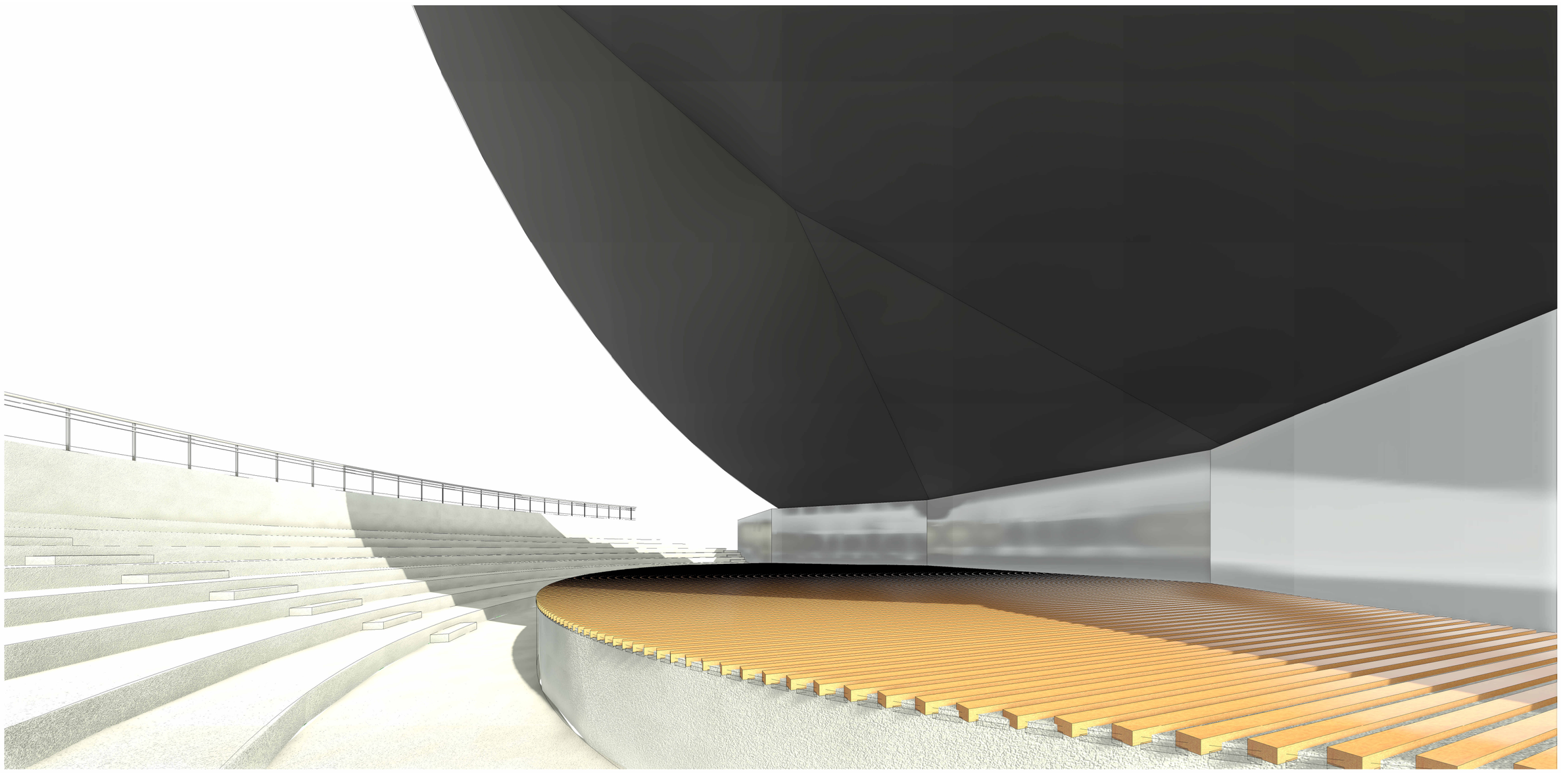

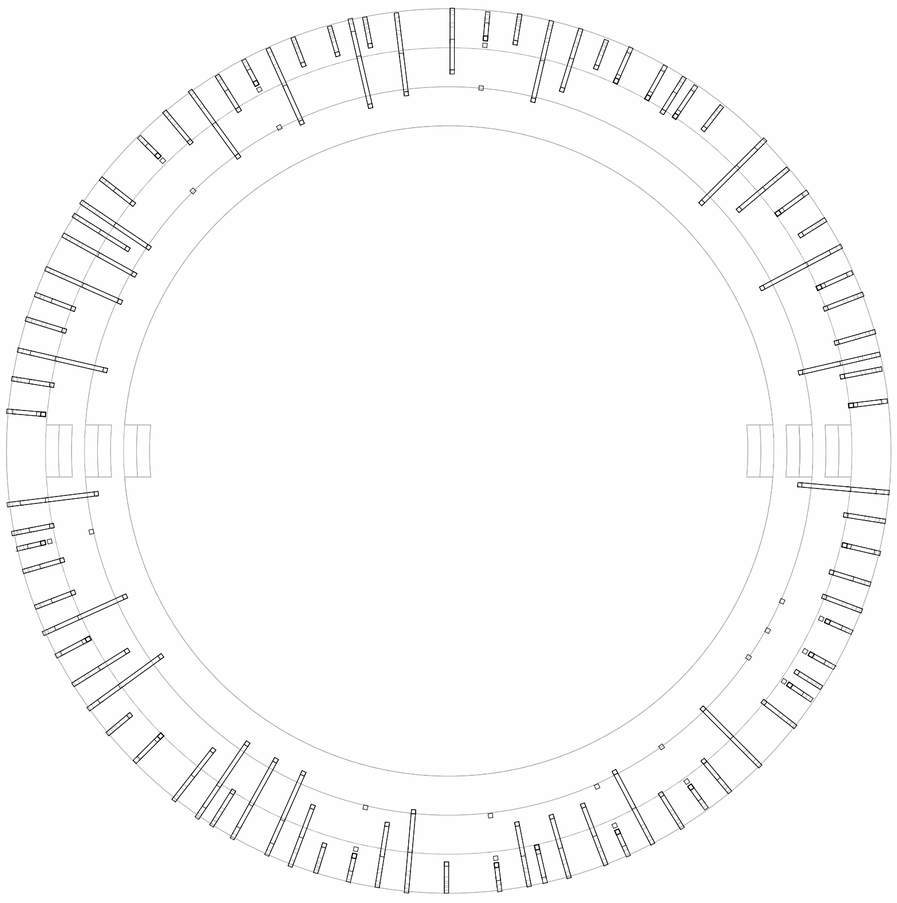

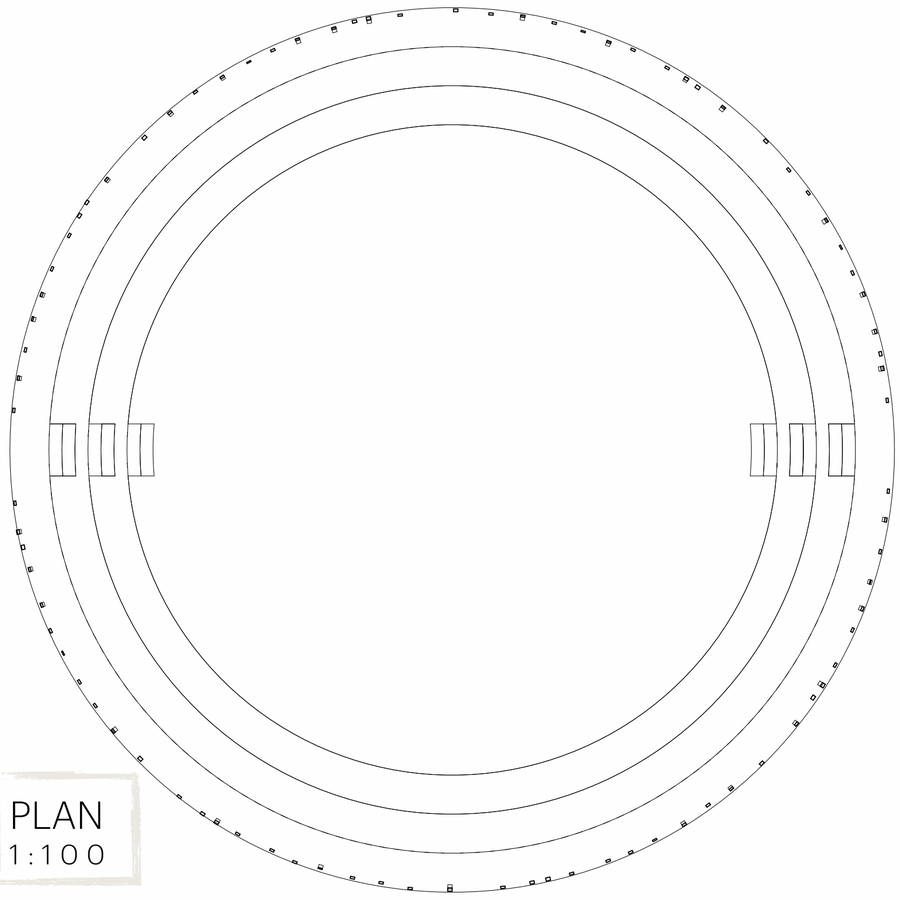

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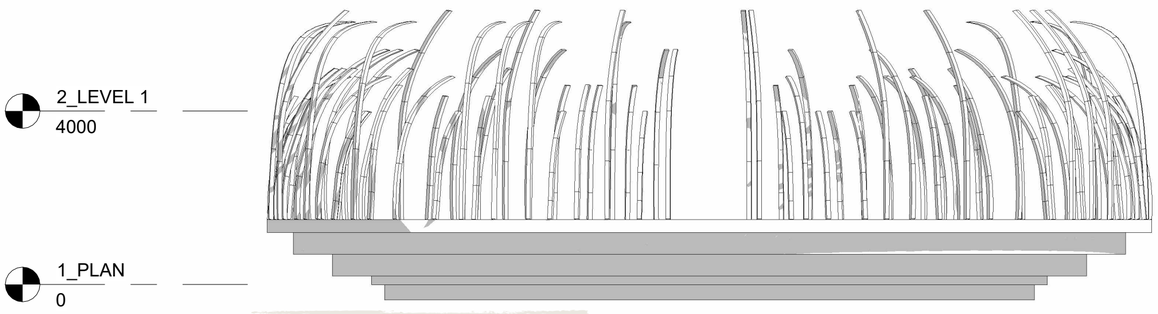

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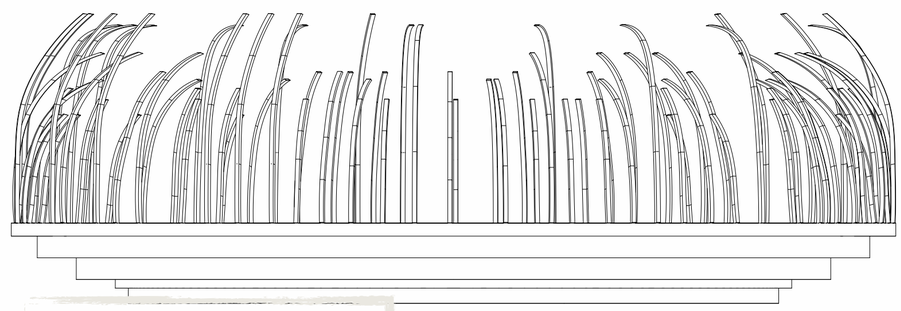

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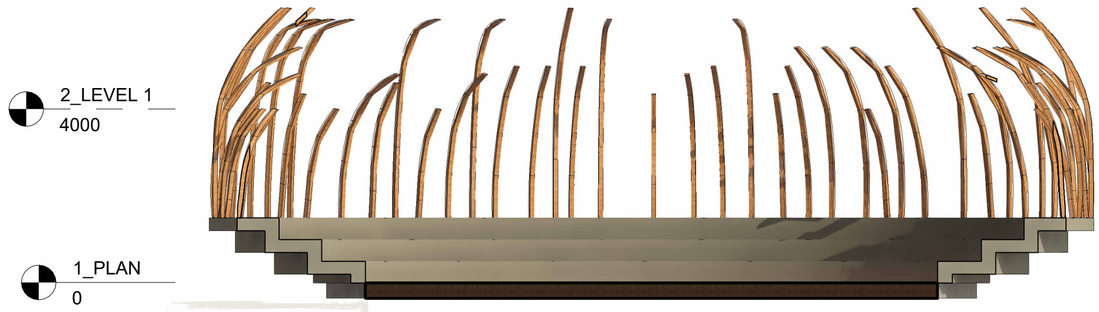

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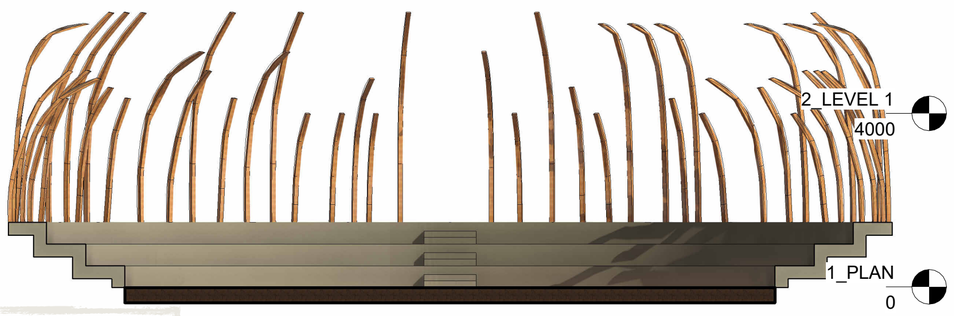

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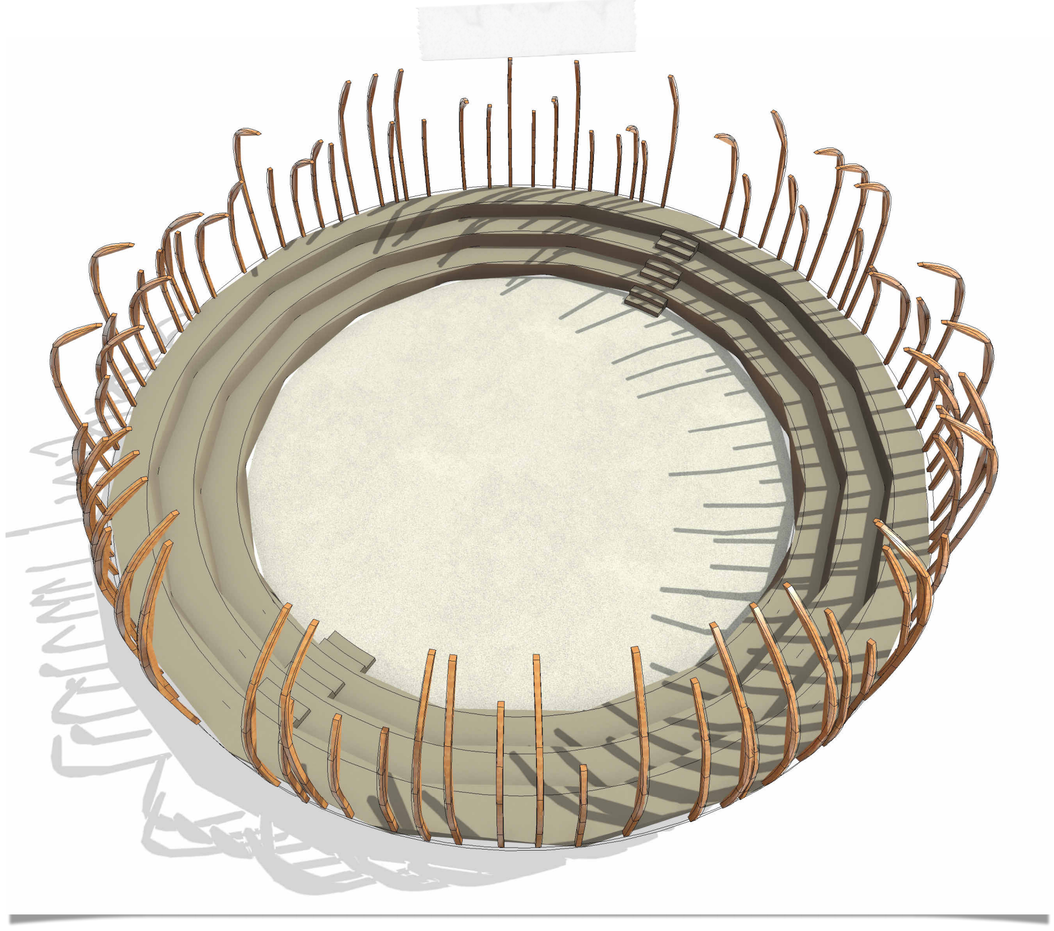

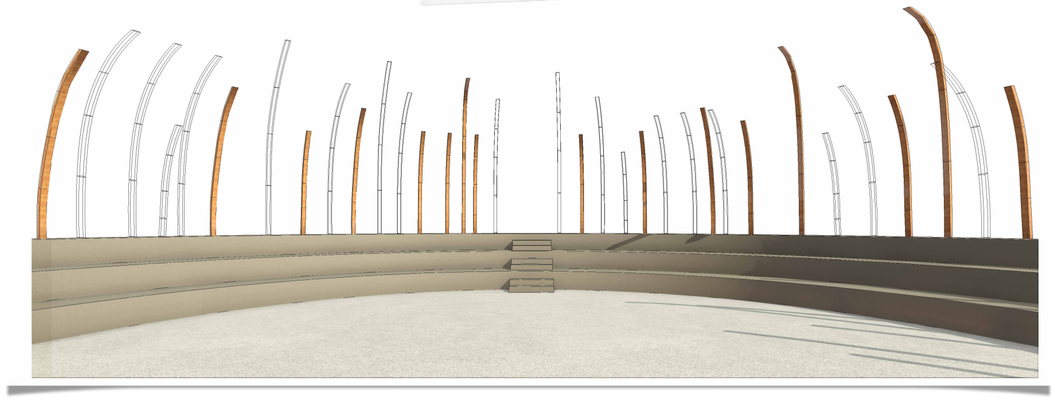

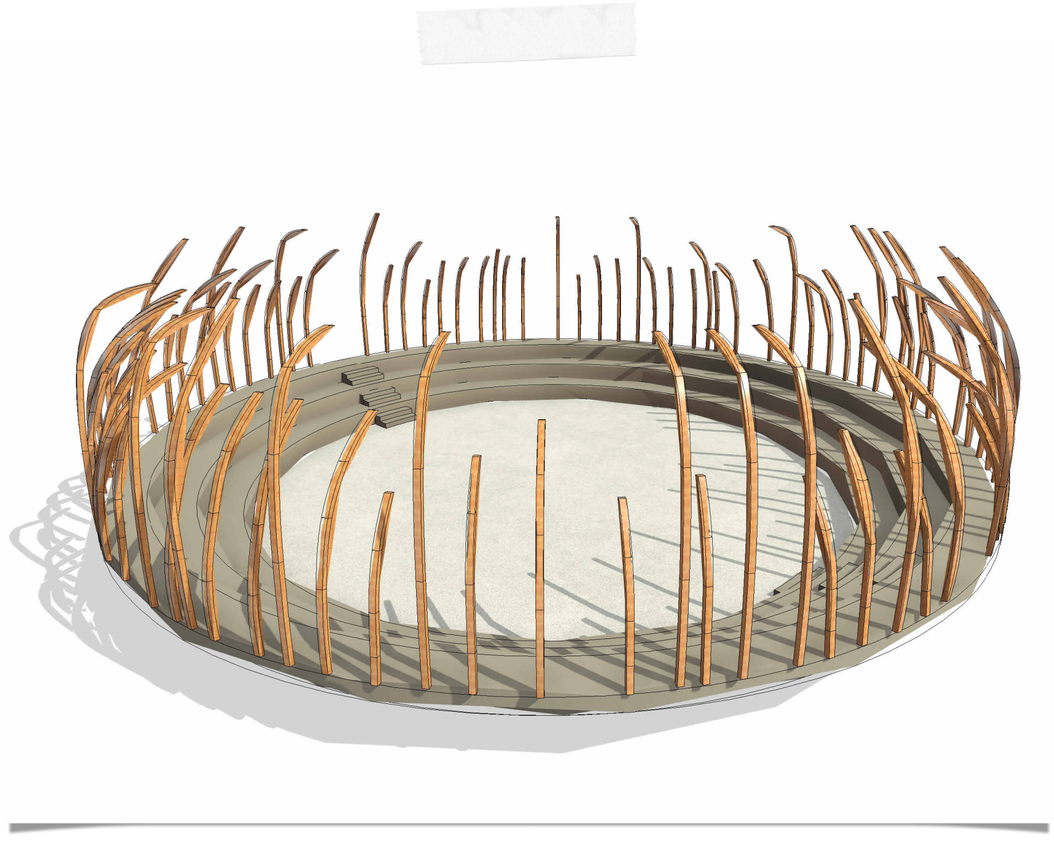

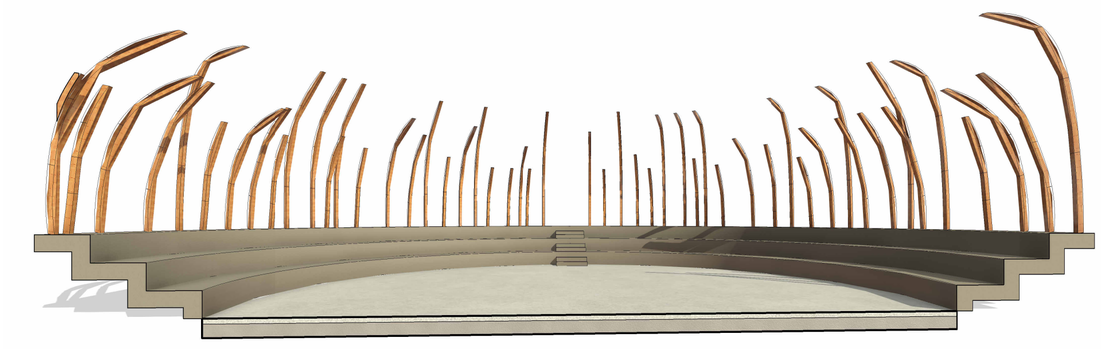

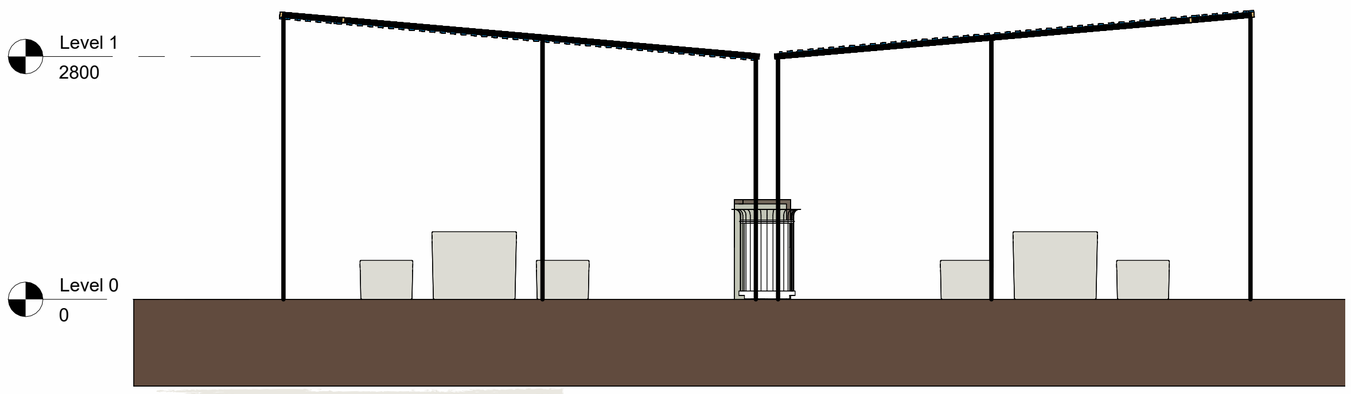

NORTH ELEVATION
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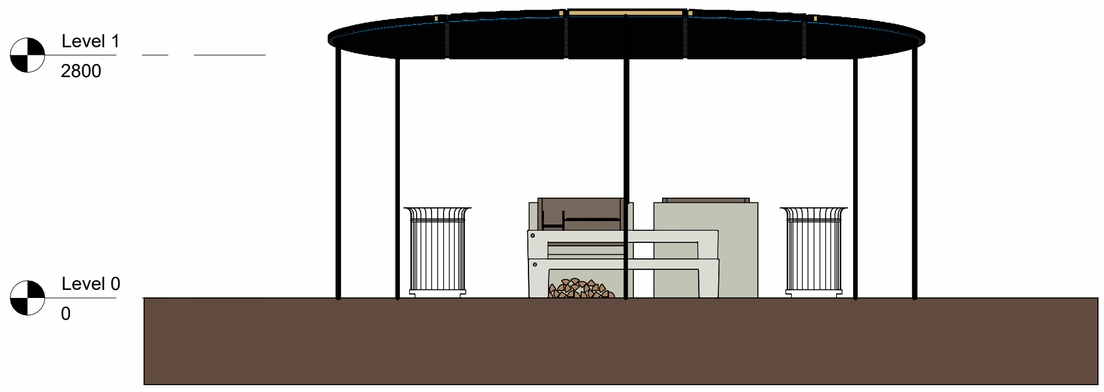

EAST ELEVATION
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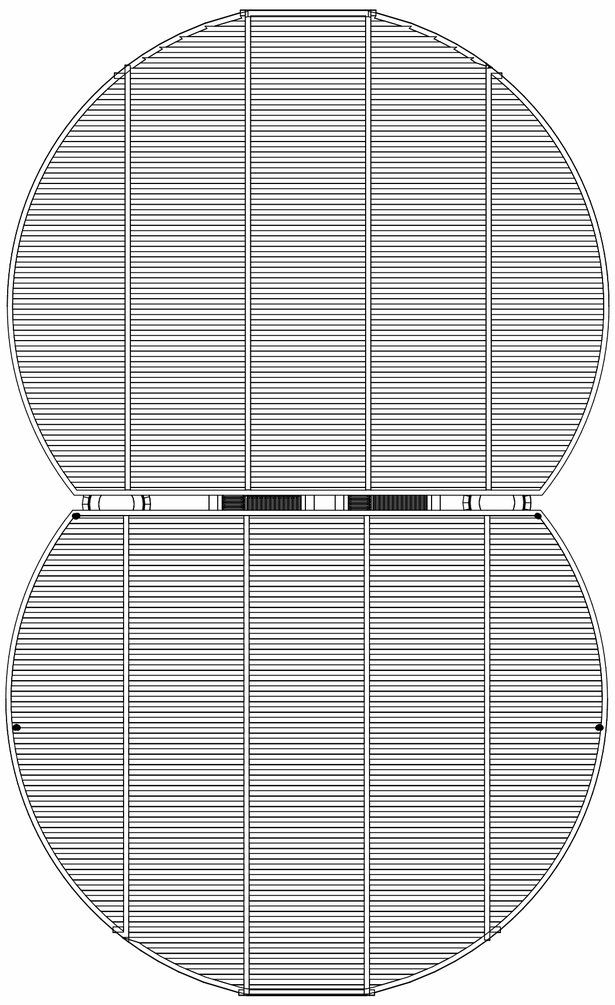

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