

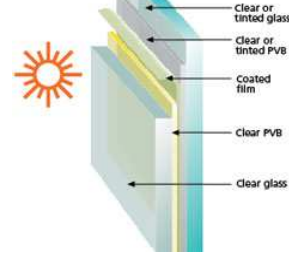
09

TECHNICAL REPORT



9.1 Material Selection

Glazing CoolVue



- Heat gain reduced by 50%
- Filters 99.5% UV Radiation
- Locally Manufactured

Roof material Rheinzink



- 90% recyclable
- Low Co2 Emissions in production
- No Toxic coating
- Natural material
- Low embodied energy

Polycarbonate Multiwall



- Energy efficient
- Filters 99.9% UV Radiation
- Locally Manufactured
- Heat gain reduced

Insulation Thermocoustex



- Energy efficient
- Acoustic and Thermal properties
- 100% recyclable
- Low embodied energy
- Locally Manufactured

Wall Material
Facebrick



- Manufacturing process creates jobs
- Locally Manufactured
- Long life cycle

Masonry construction
Recyclable Bricks



- Manufacturing process creates jobs
- Locally Manufactured
- Locally recycled

Wall Coating 1
Aqua Coat Paint



- No VOC Emissions
- Improved Thermal properties
- Non Toxic
- Manufactured Locally
- Resistant to weather

Wall Coating 1
In Situ Concrete



- Manufacturing process creates jobs
- Locally Manufactured
- Long life cycle
- Low embodied energy

Structure
Concrete



- Manufacturing process creates jobs
- Locally Manufactured
- Long life cycle
- Low embodied energy

Sunscreen
Recycled Sunscreen



- No VOC Emissions
- Improved Thermal properties
- Non Toxic
- Manufactured Locally
- Resistant to weather

9.2 Integrated building system

The building uses an integrated system in order to comply with sustainable design protocol. It uses structural, mechanical and electrical systems that integrate to facilitate sustainable use of energy, and minimize cost

Air

Natural cross ventilation

HVAC (Air supply and extraction)

Ventilation chimneys

Passive heating and cool

Thermal Mass

Thick solid walls on the west elevation

Auditorium utilizes these walls for acoustic purposes

Natural Lighting

Atrium to bring in light

Large spanning glazing

Sufficient shading on the north, east and west elevations

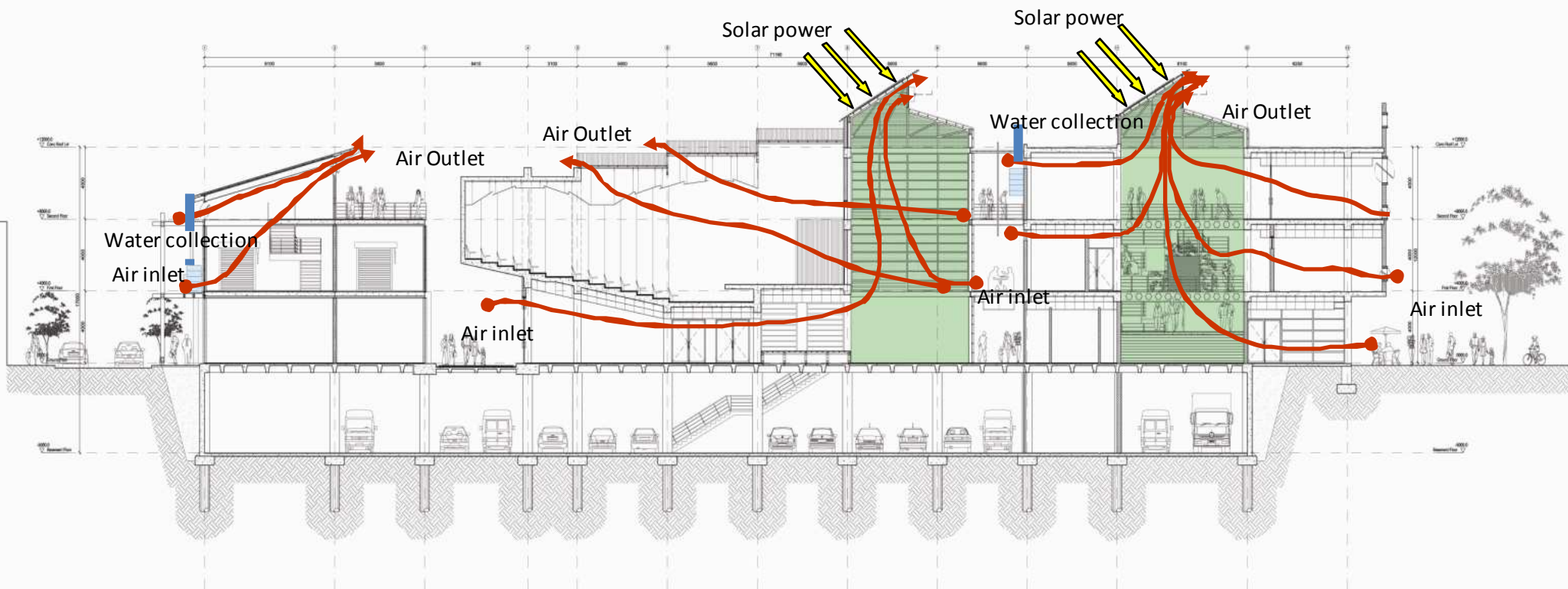
Light through roof defused

Water

Storm water Harvesting

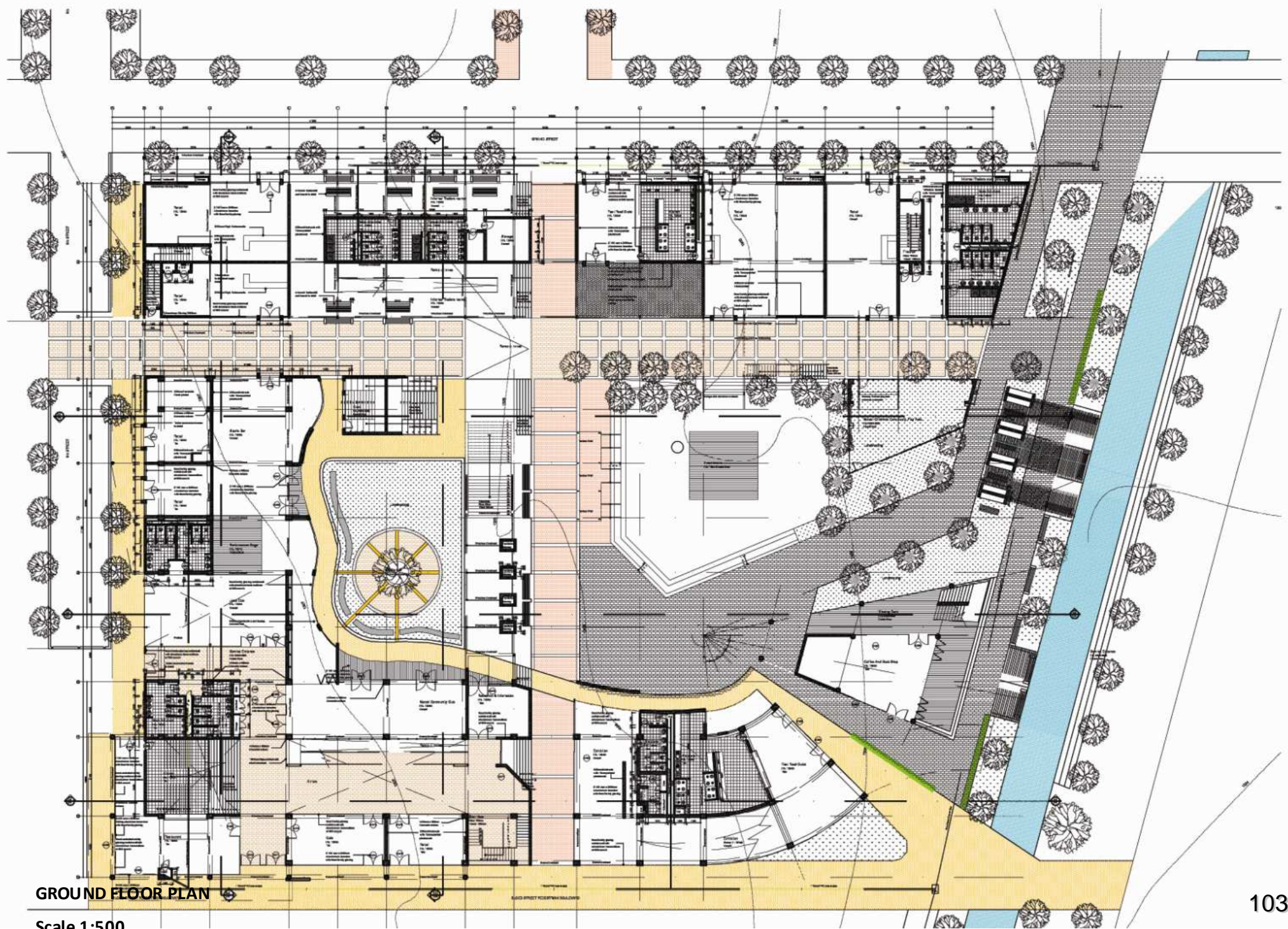
Electricity

Photovoltaic cells¹



Integrated system

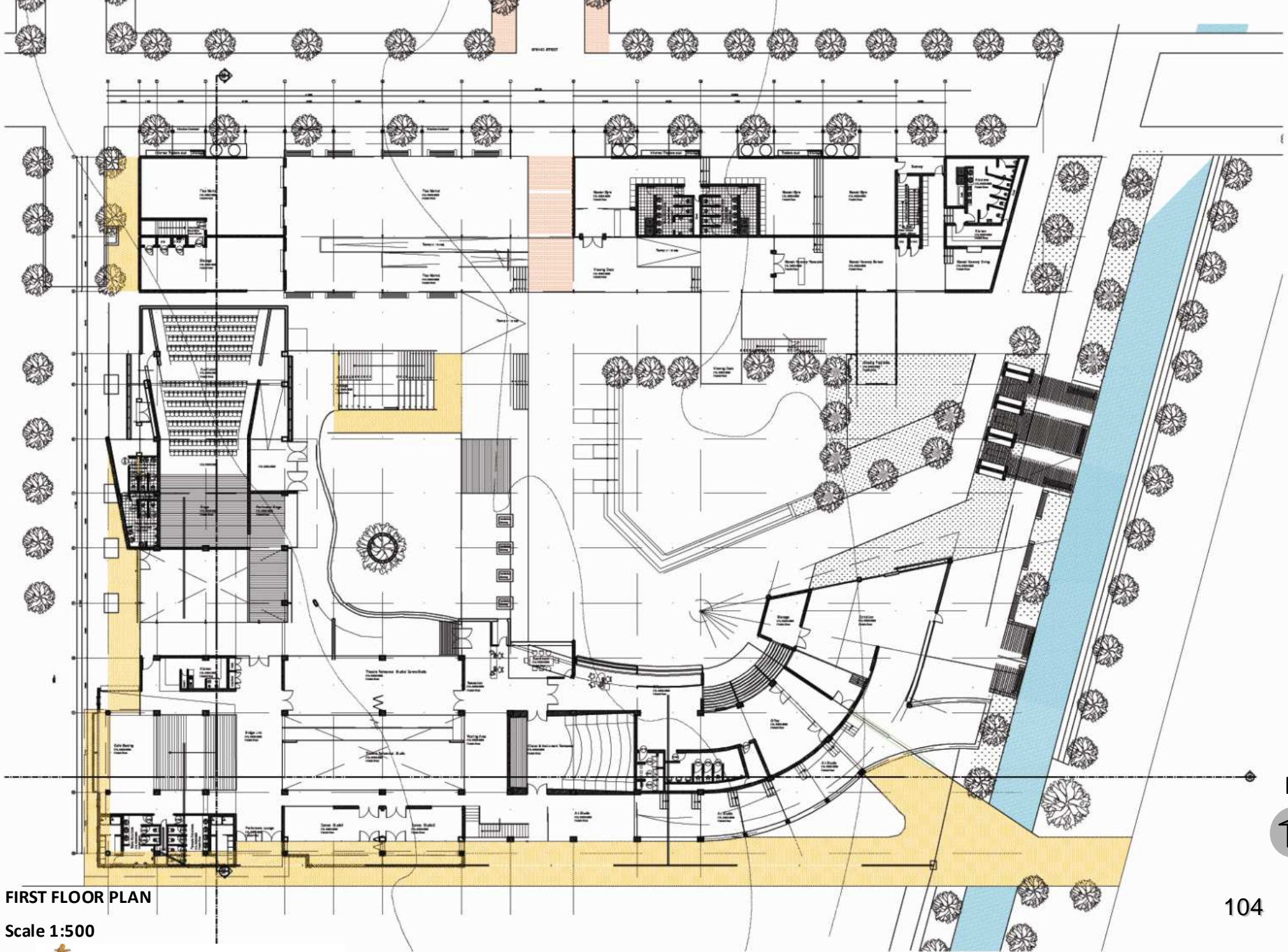
Scale 1: 250



GROUND FLOOR PLAN

Scale 1:500

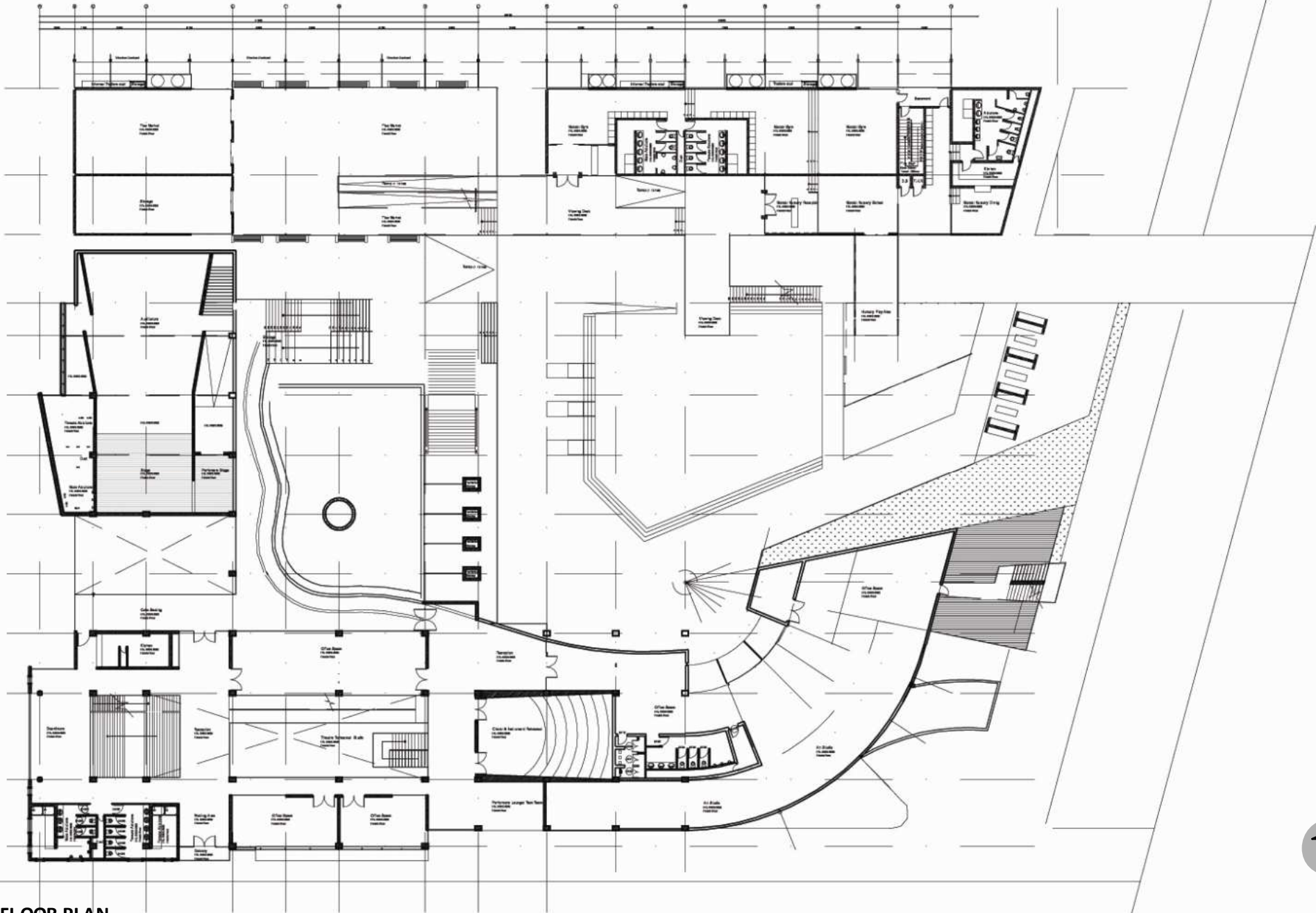




FIRST FLOOR PLAN

Scale 1:500

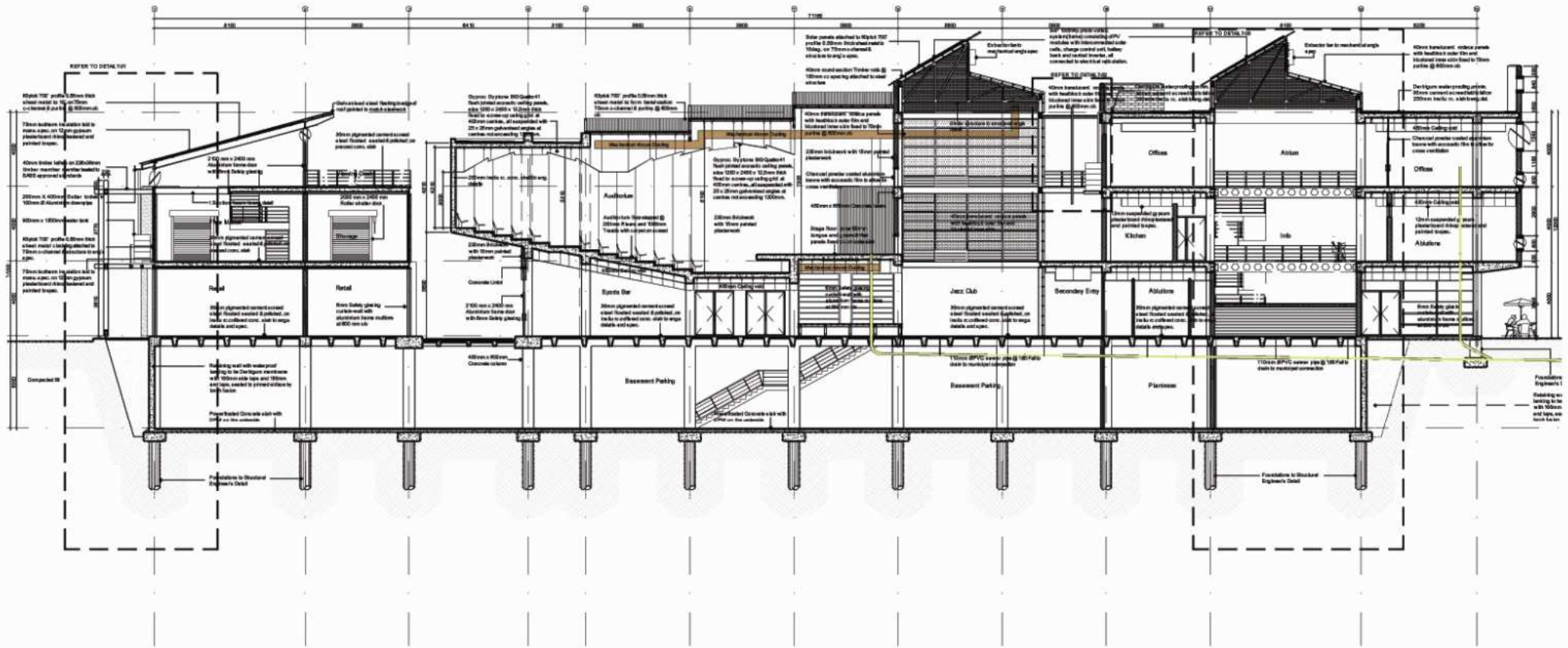




SECOND FLOOR PLAN

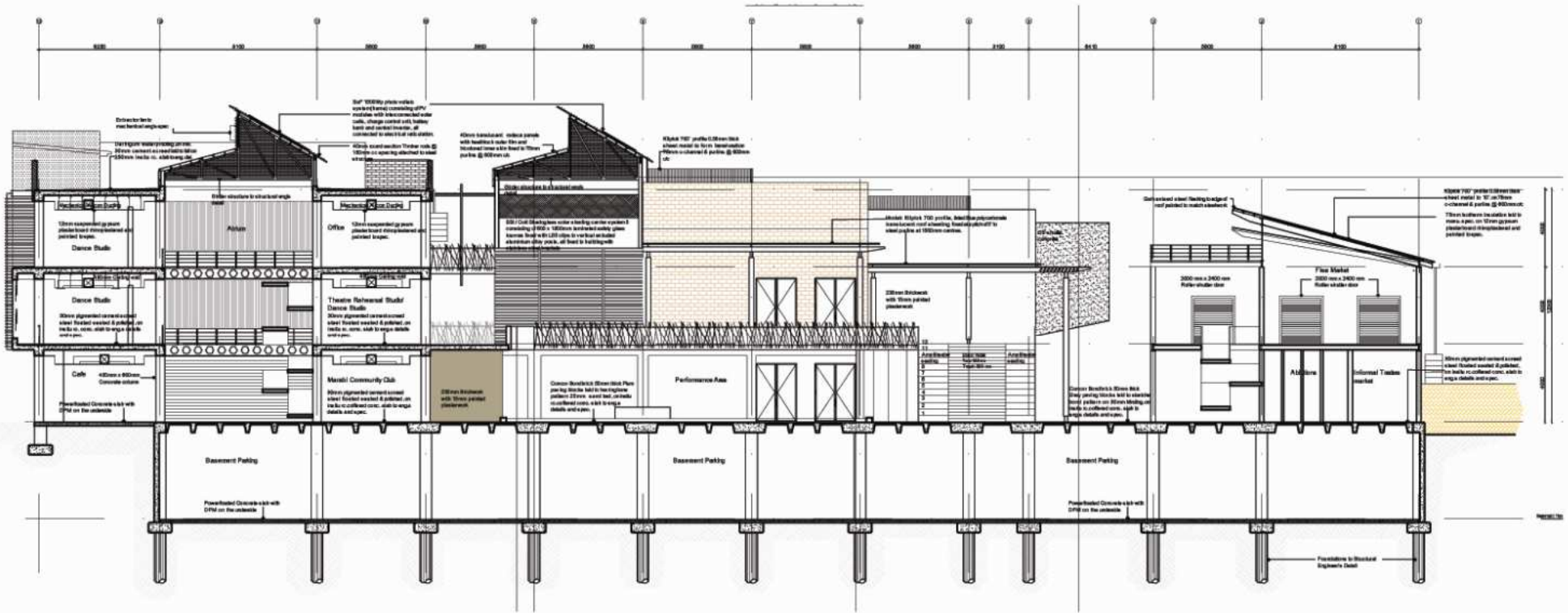
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SECTION A-A

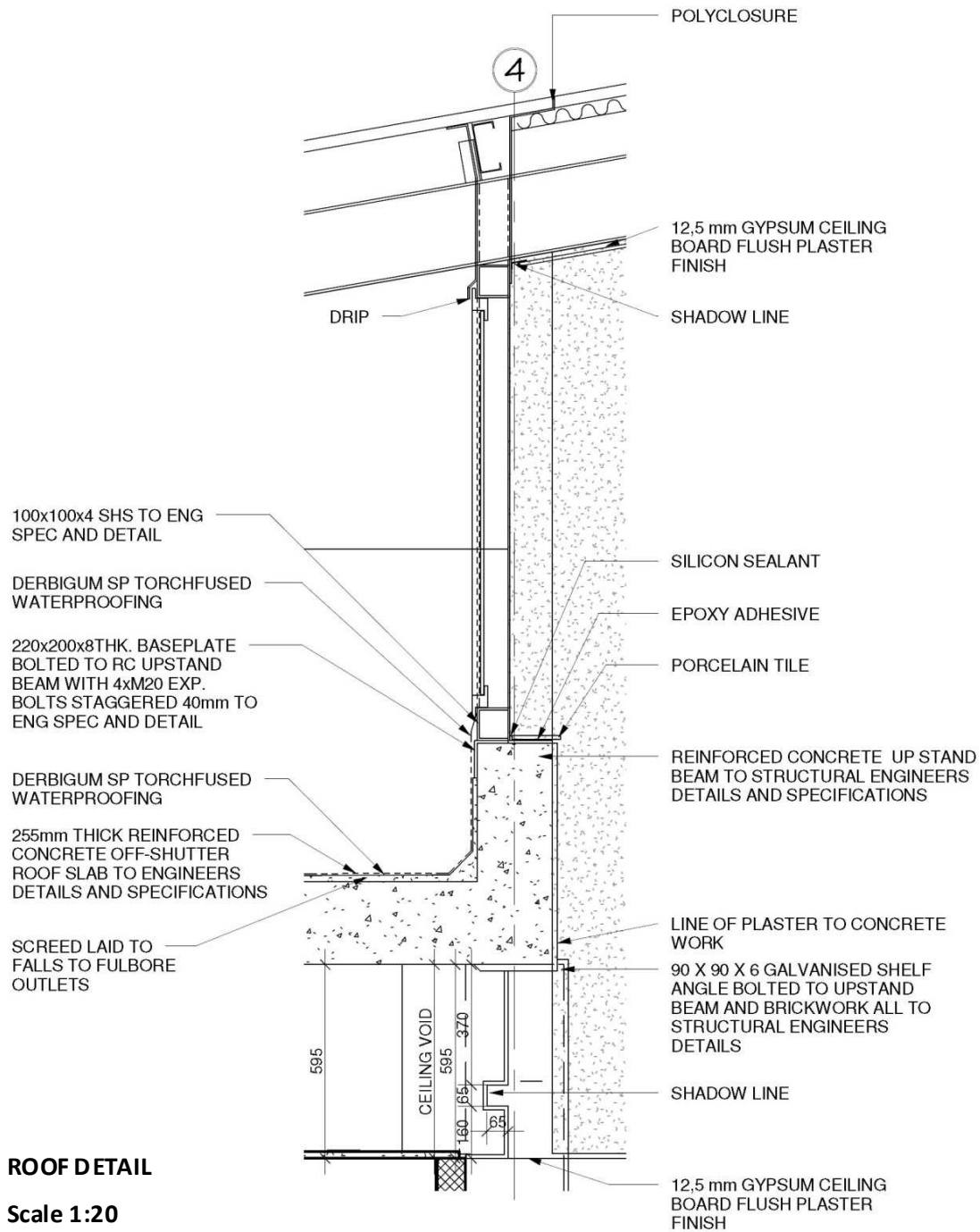
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SECTION C-C

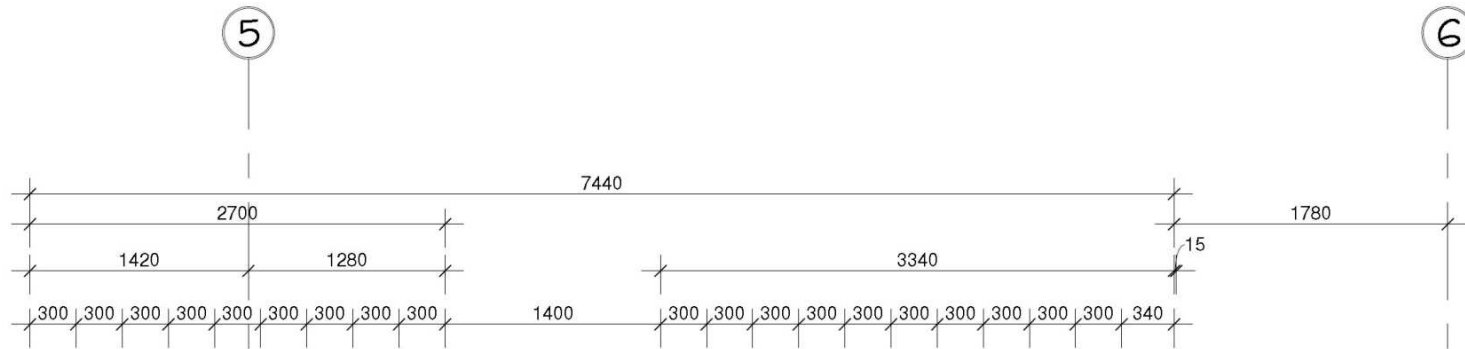
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ROOF DETAIL

Scale 1:20



BALUSTRADE TO BE 1000mm ABOVE BALCONY FFL.

APPROVED EXTERNAL TILING OR DERBIGUM SP TORCHFUSED WATERPROOFING SCREED LAID FALLS TO FULBORE OUTLETS

30mm SCREED

255mm THICK REINFORCED CONCRETE IN SITU FLOOR SLAB ENGINEERS DETAILS AND SPECIFICATIONS

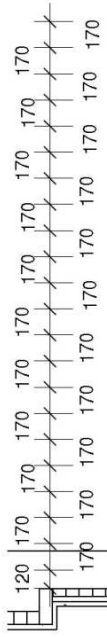
STAIRCASE
 300mm TREADS
 170mm RISERS
 1000mm HIGH STAINLESS STEEL BALUSTRADE

POST TO DETAIL IF REQUIRED BY STRUCTURAL ENGINEER

5
306

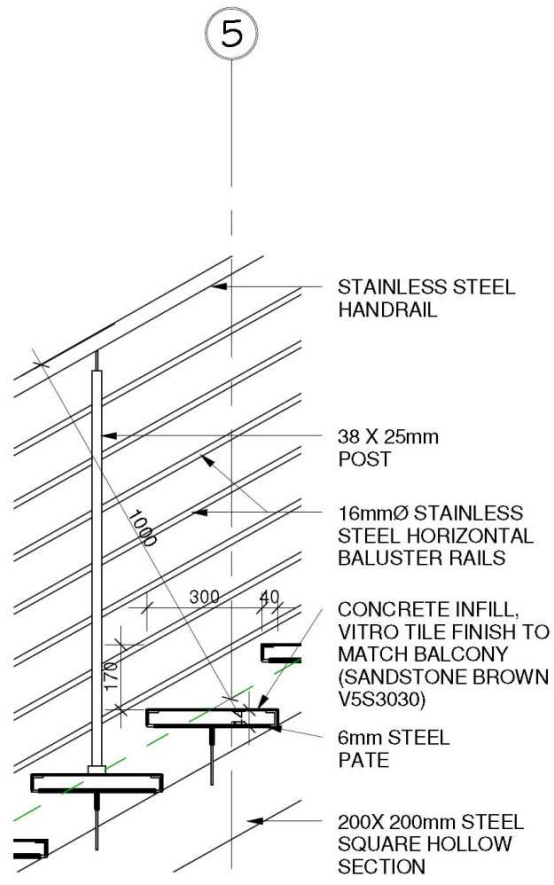
PAVING

30mm SCREED



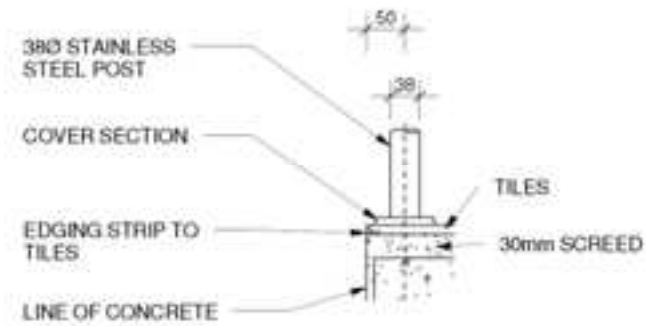
STAIR DETAIL

Scale 1:50



BALUSTRADE DETAIL

Scale 1:20



BALUSTRADE FIXING DETAIL

Scale 1:10