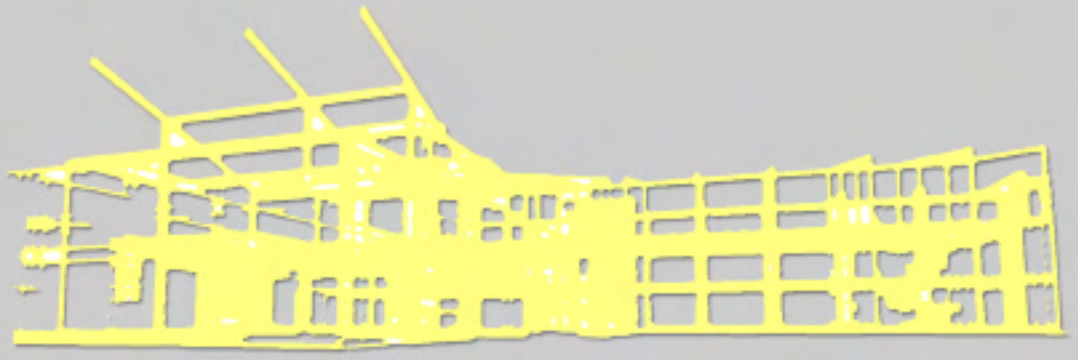
five



TECHNICAL

investigation

Technical Development

section
techni-spatial

Systems

mechanical
structural

Technical documentation

site
parking plan
section
detail

DEVELOPMENT

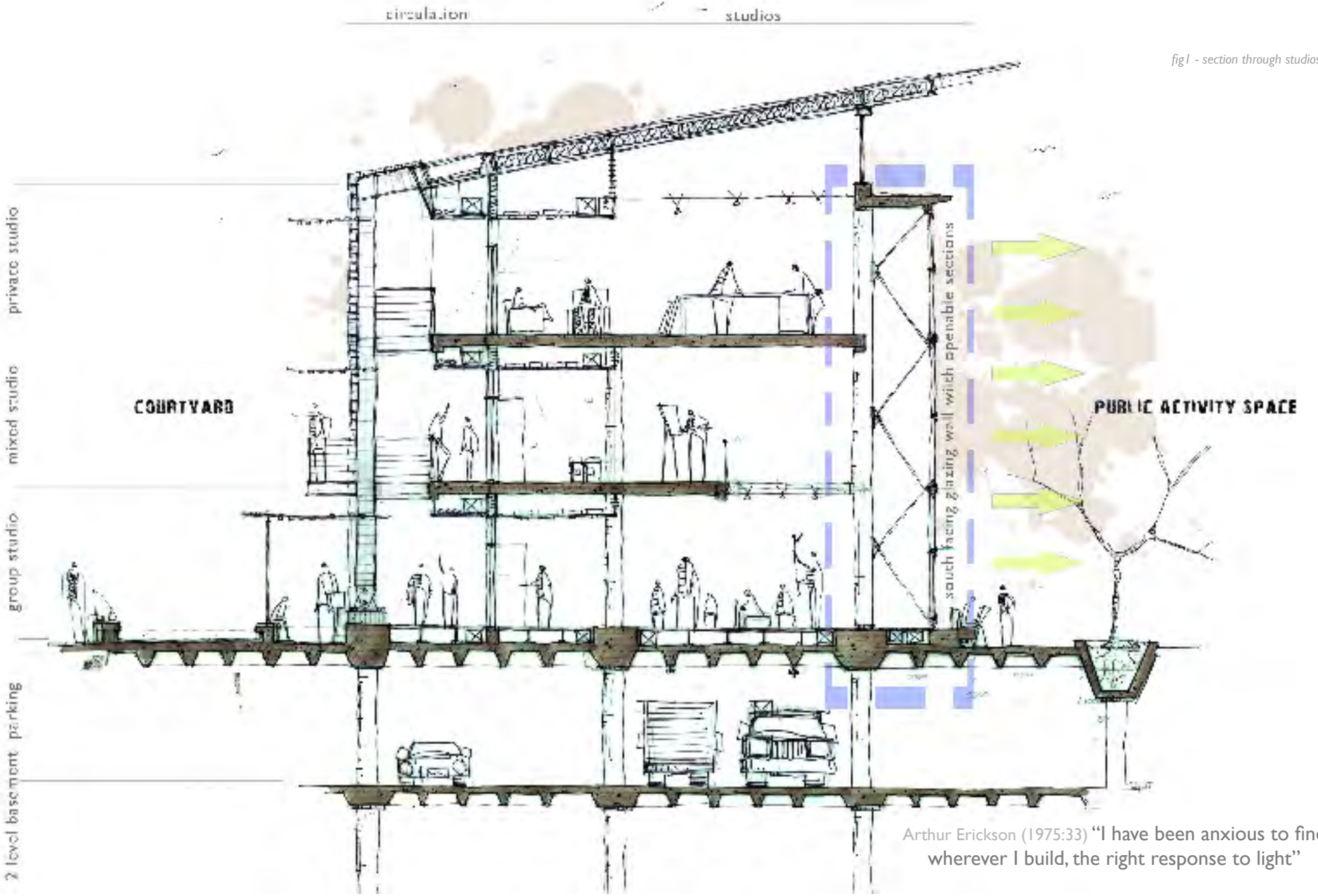


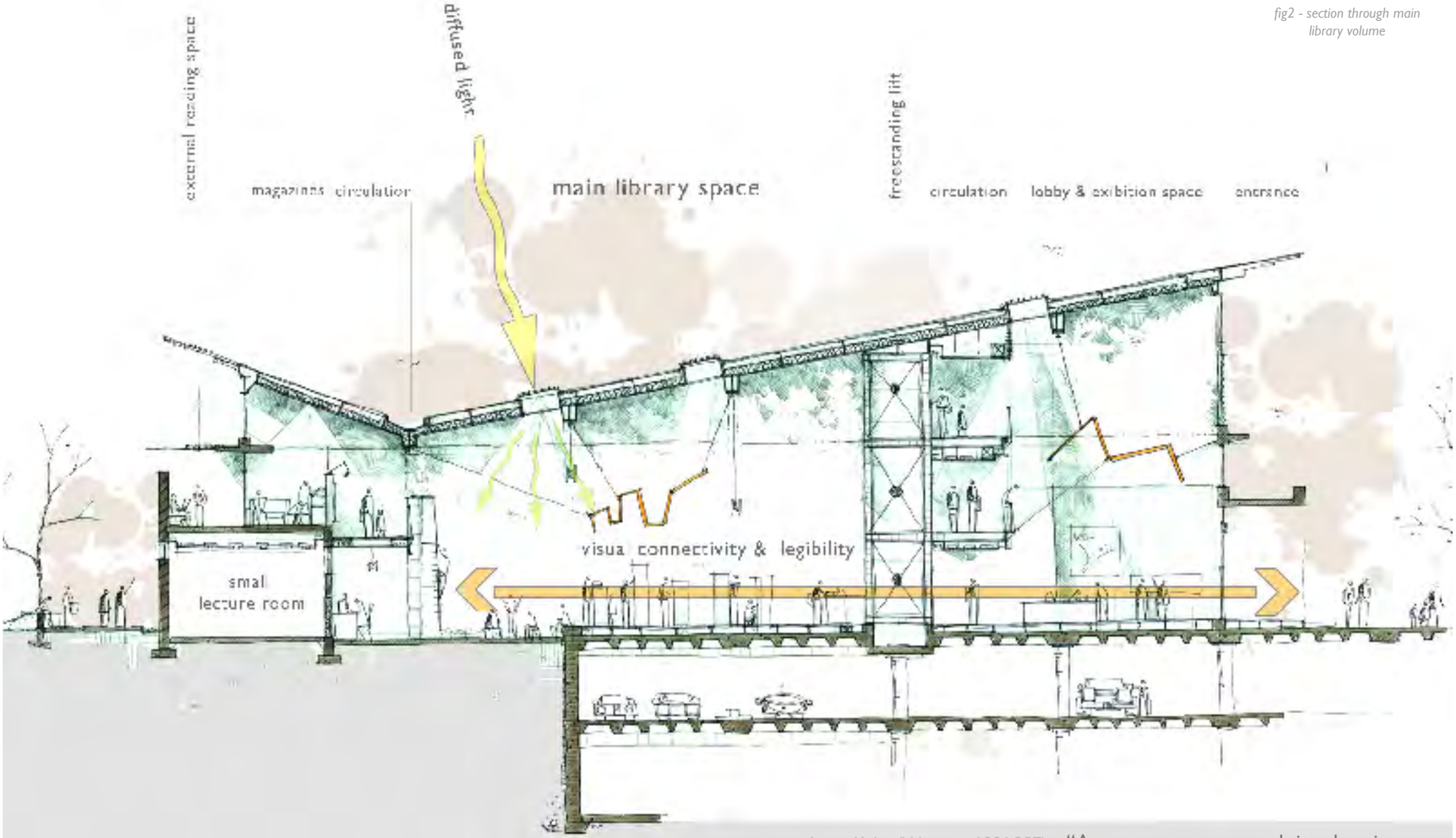
fig1 - section through studios

Arthur Erickson (1975:33) "I have been anxious to find, wherever I build, the right response to light"

DEVELOPMENT

SECTION BB
lobby & library

fig2 - section through main library volume



Louis Kahn (Wurman, 1986:257) – "A space can never reach its place in architecture without natural light"

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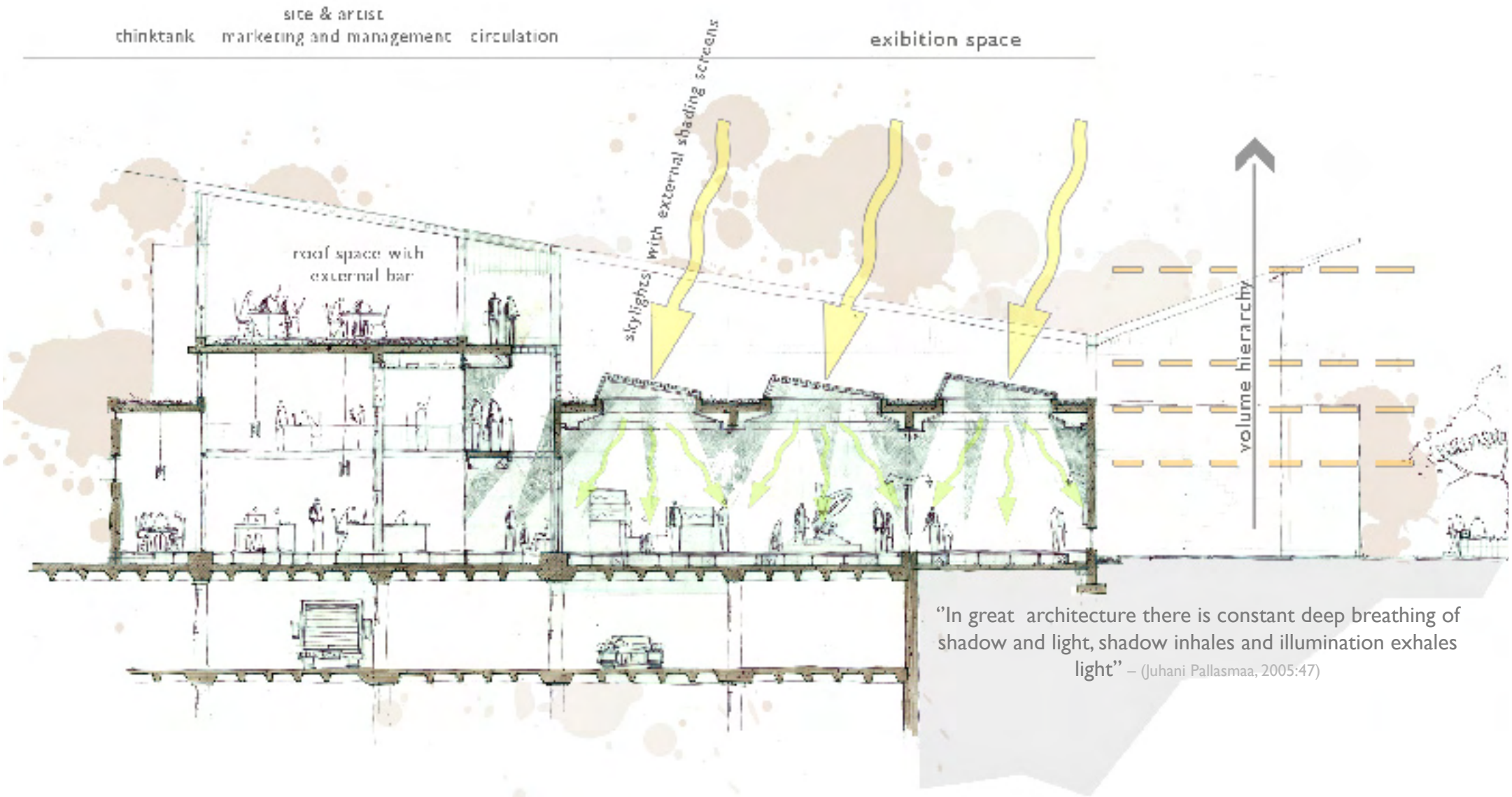
SECTION CC
office & exibition

fig3 - section through office and exhibition space



"In great architecture there is constant deep breathing of shadow and light, shadow inhales and illumination exhales light" – (Juhani Pallasmaa, 2005:47)

DEVELOPMENT

SECTION DD
exibition & library

fig4 - section through library

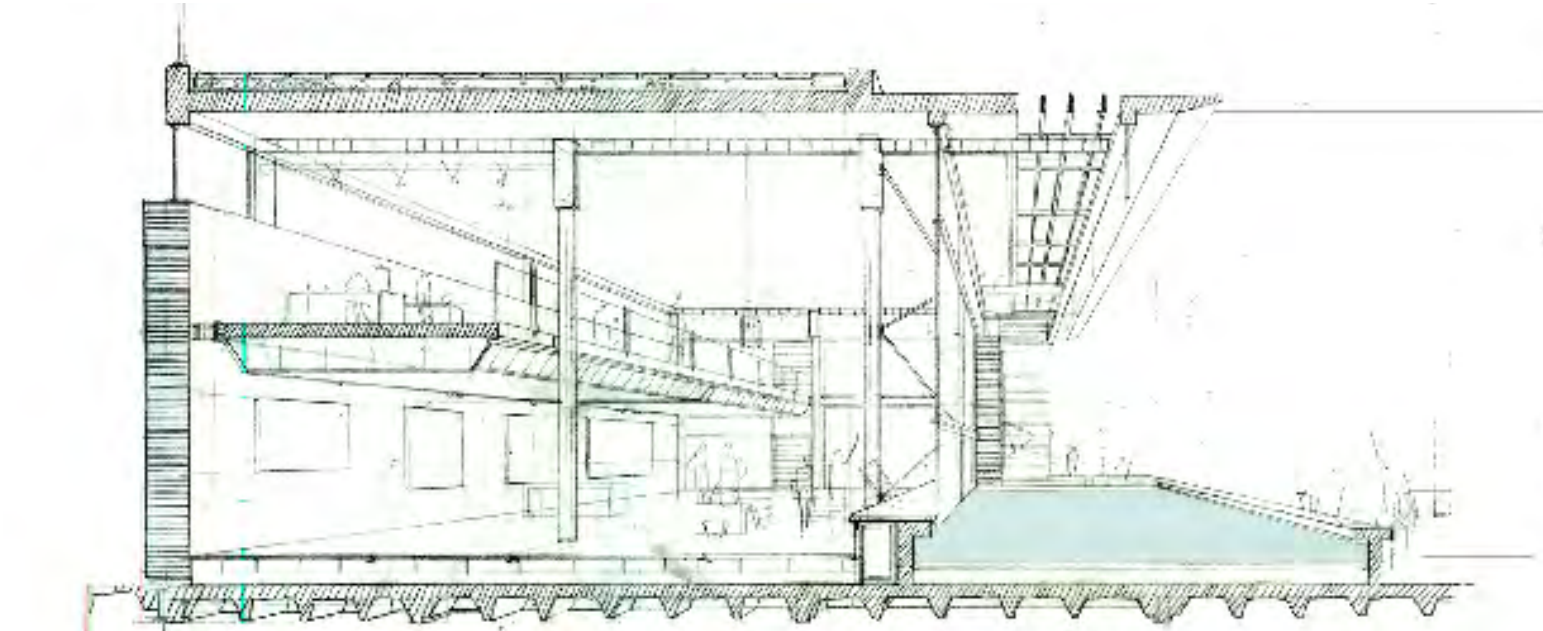


fig5 - Perspective section through office

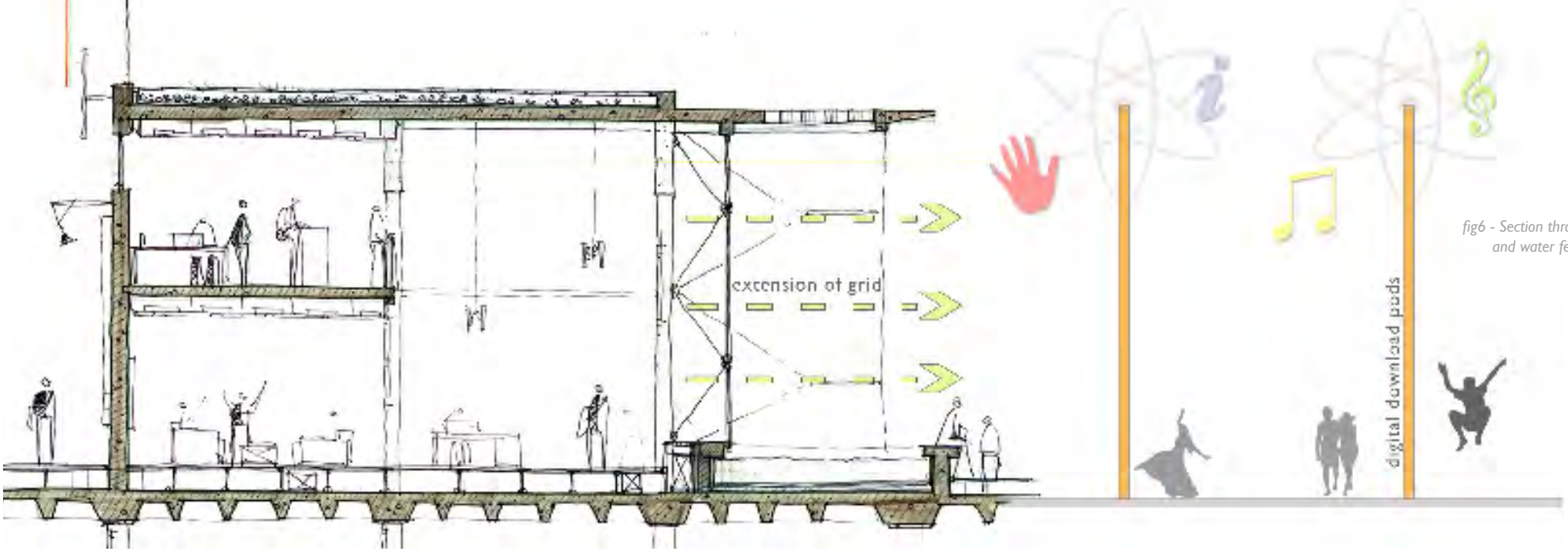


fig6 - Section through office and water feature

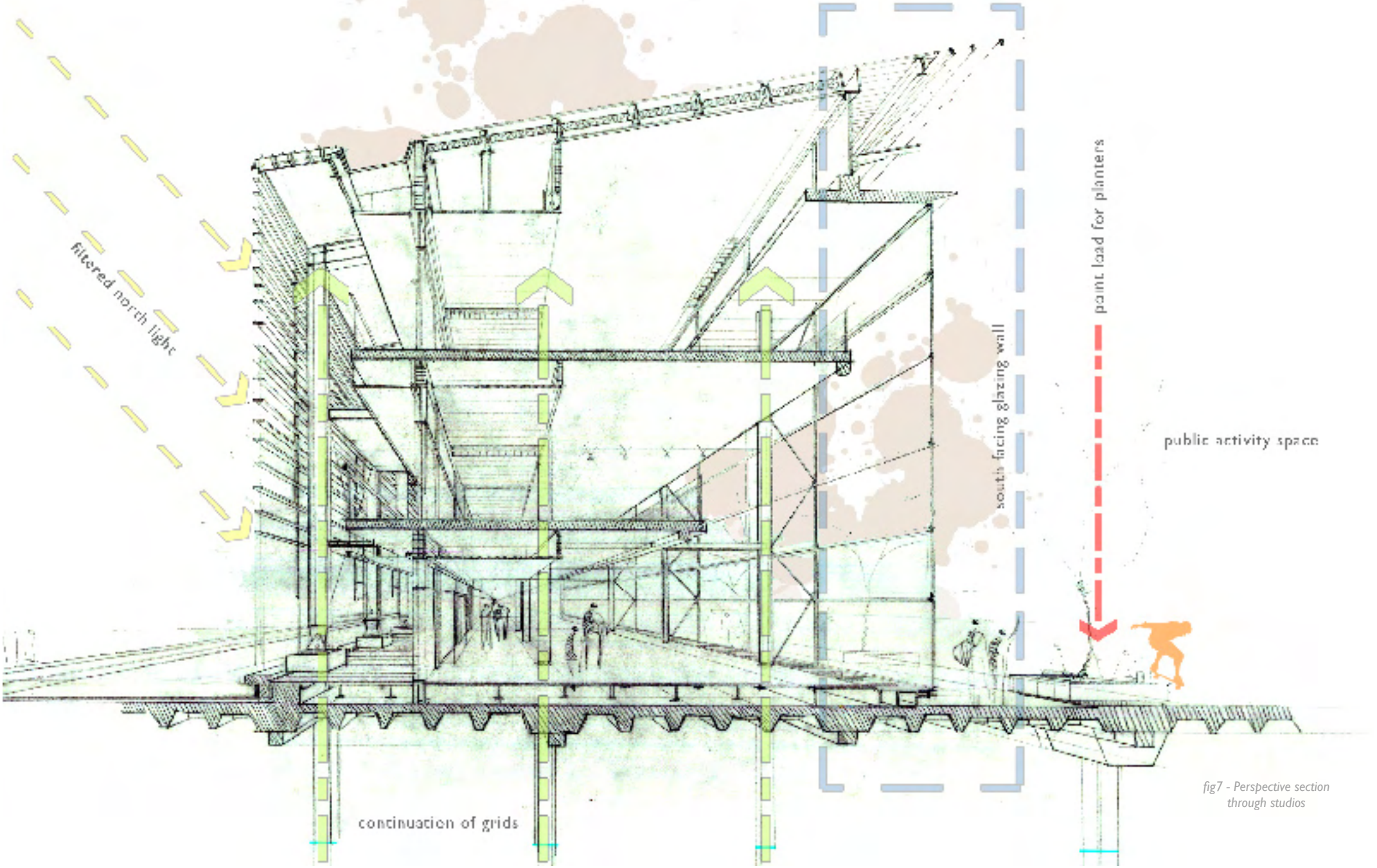


fig7 - Perspective section through studios

DEVELOPMENT

techni-spatial

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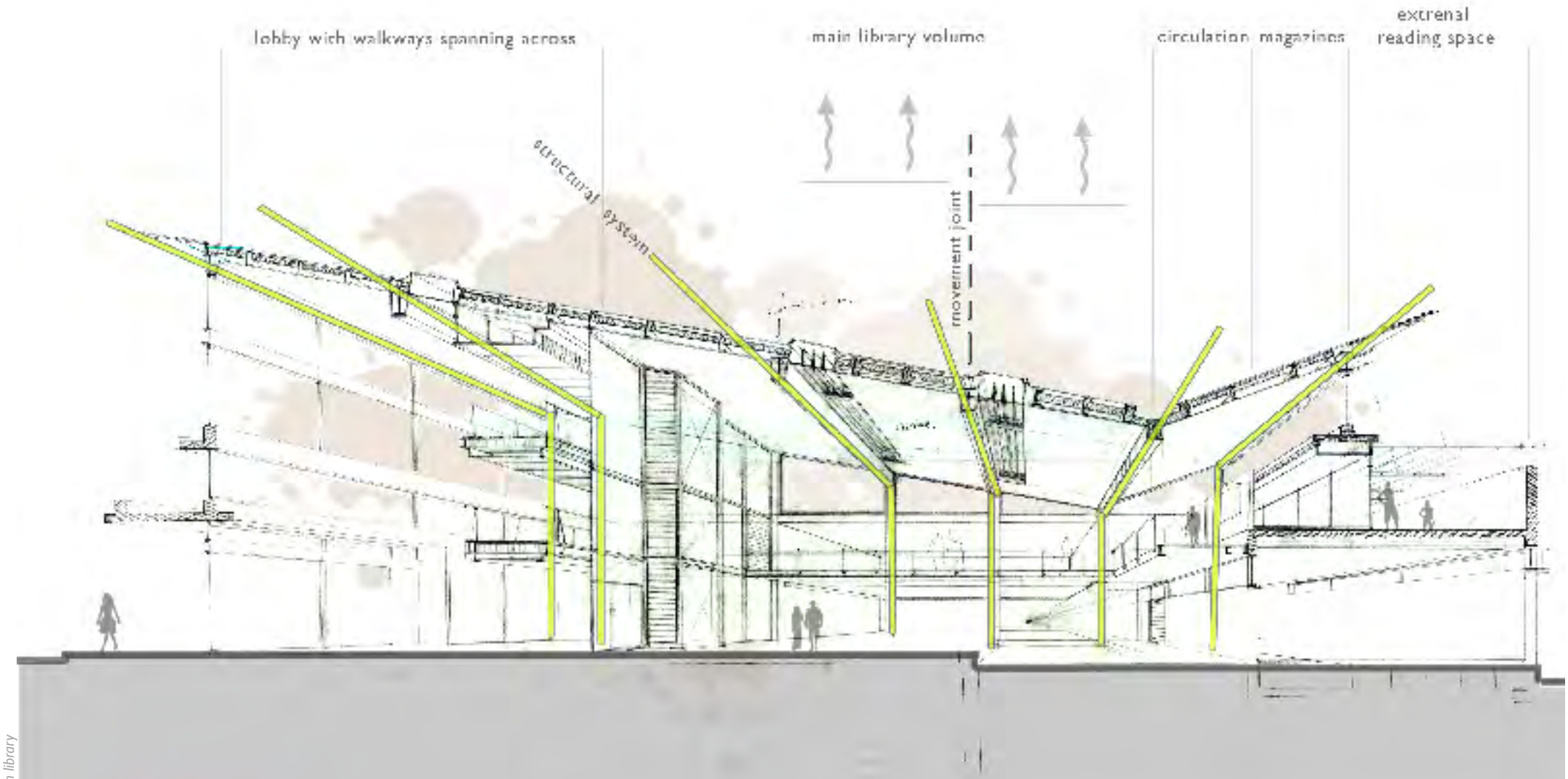
SECTION BB

lobby & library



Louis Kahn (Wurman, 1986:6) - "...structure is the maker of light. When you decide on the structure, you are deciding on light. In old buildings, the columns were an expression of light. Light, no light, light, no light, you see. The module is also light, no light. "

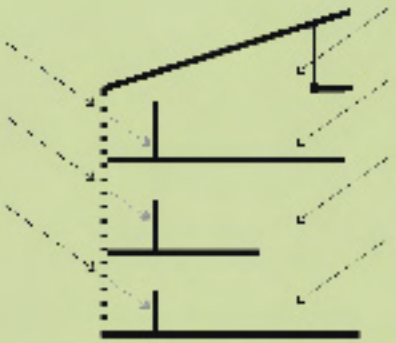
fig8 - Perspective section through library

LIGHT
summary

DIAGRAMS

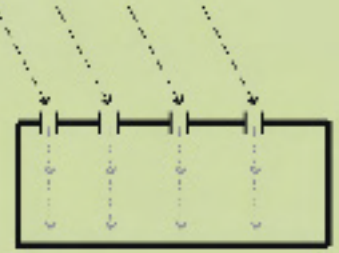
The application of light is guided by the three primary facets of architectural light, namely : Northern light, direct light and broken or diffused light. It is near impossible to fully quantify the exact light quality that will be attained, but this methodology helps to rationalize the application of light to space.

- screen
- northern light
- direct light
- broken light



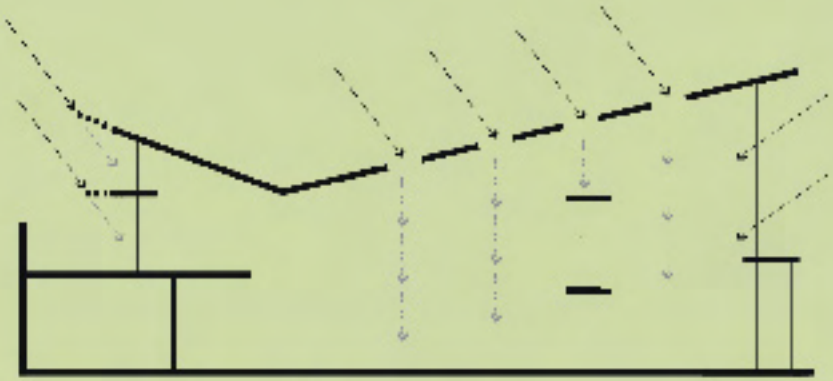
studios

fig9 -Studios_ light quality diagram



exibition

fig10 -Exhibition space_light quality diagram



library

fig11 -Library_light quality diagram

fig12 -Apartheid museum

a b s t r a c t

Air is sucked in through sculptural intake ducts which points in the direction of the predominant wind direction. This air is then circulated through copper pipes in a water storage tank, which lowers the air temperature with a few degrees. This cool, filtered air is then distributed through the building via a mechanical ventilation network.

The water in the storage tank is harvested from the site surface. This water is collected via a network of flat full-bores with downpipes, cast into columns, and drainage channels distributed across the site. This water is collected in a 192,000L primary collection tank, and then distributed to three smaller storage tanks where it is implemented in the ventilation strategy.

fig 13 - Sectional model - Mechanical ventilation system

SYSTEM NETWORK

mechanical

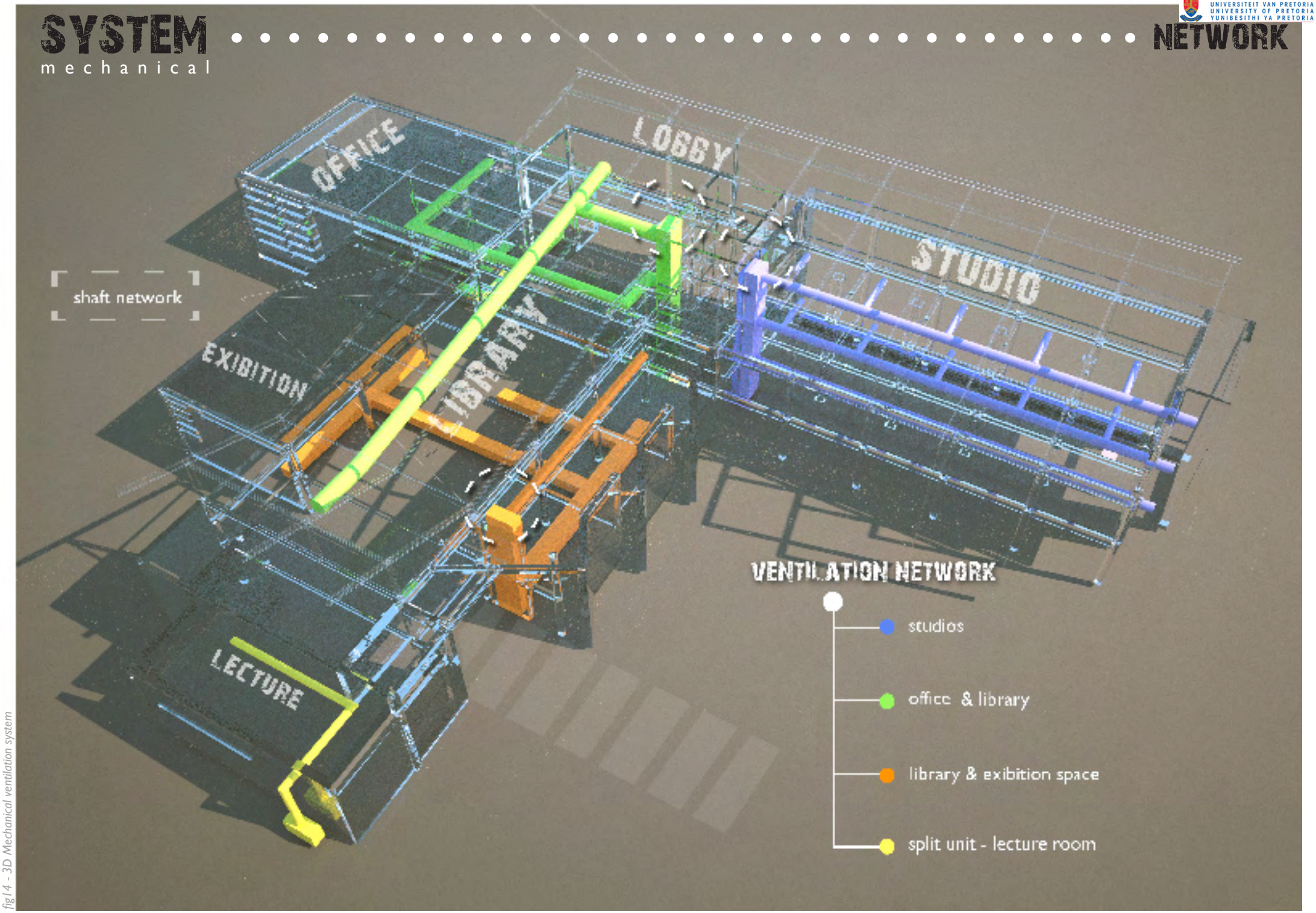


fig14 - 3D Mechanical ventilation system

SYSTEM
structural

BEAM + COLUMN

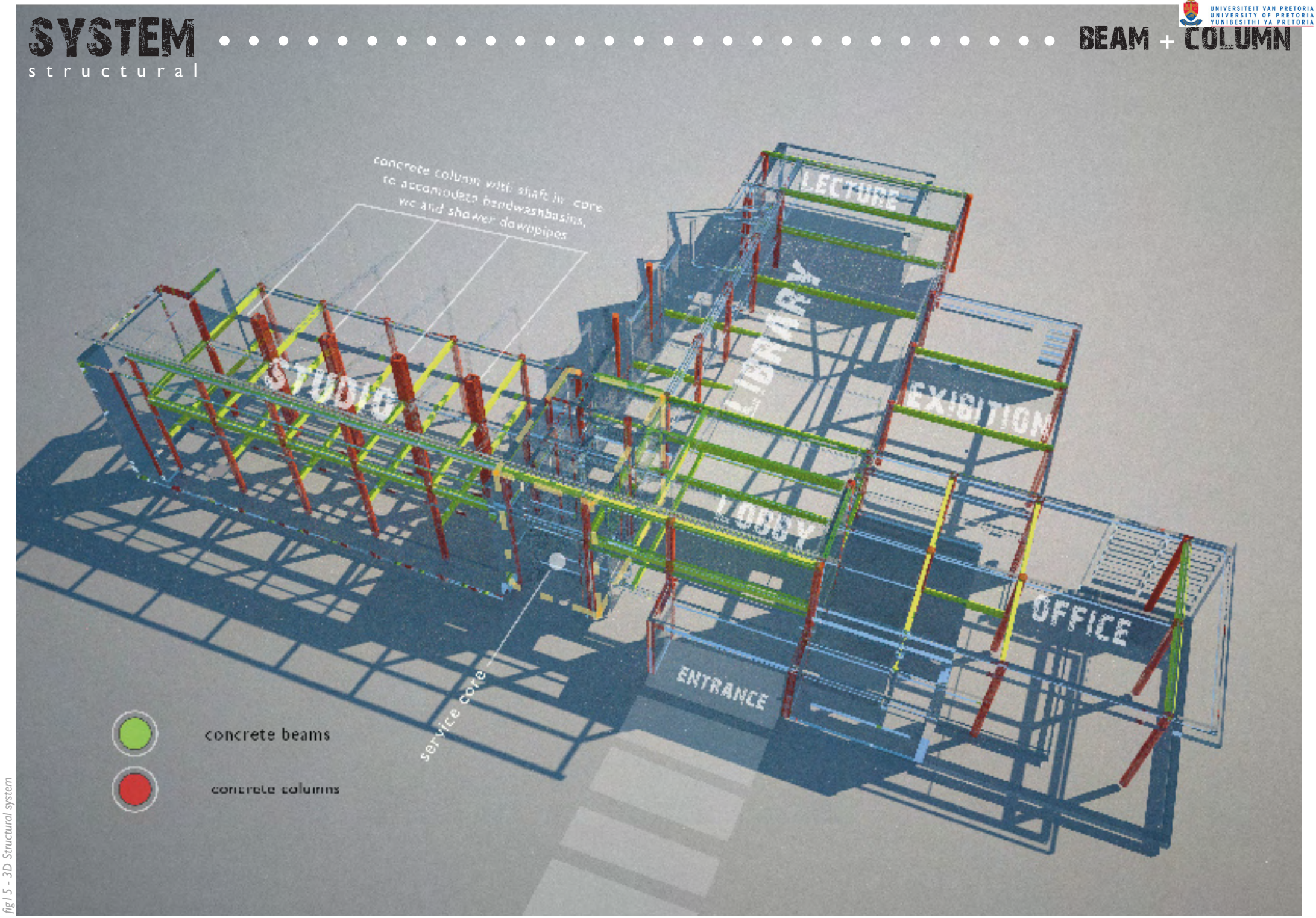


fig 1.5 - 3D Structural system

SYSTEM
structural

BEAM + COLUMN

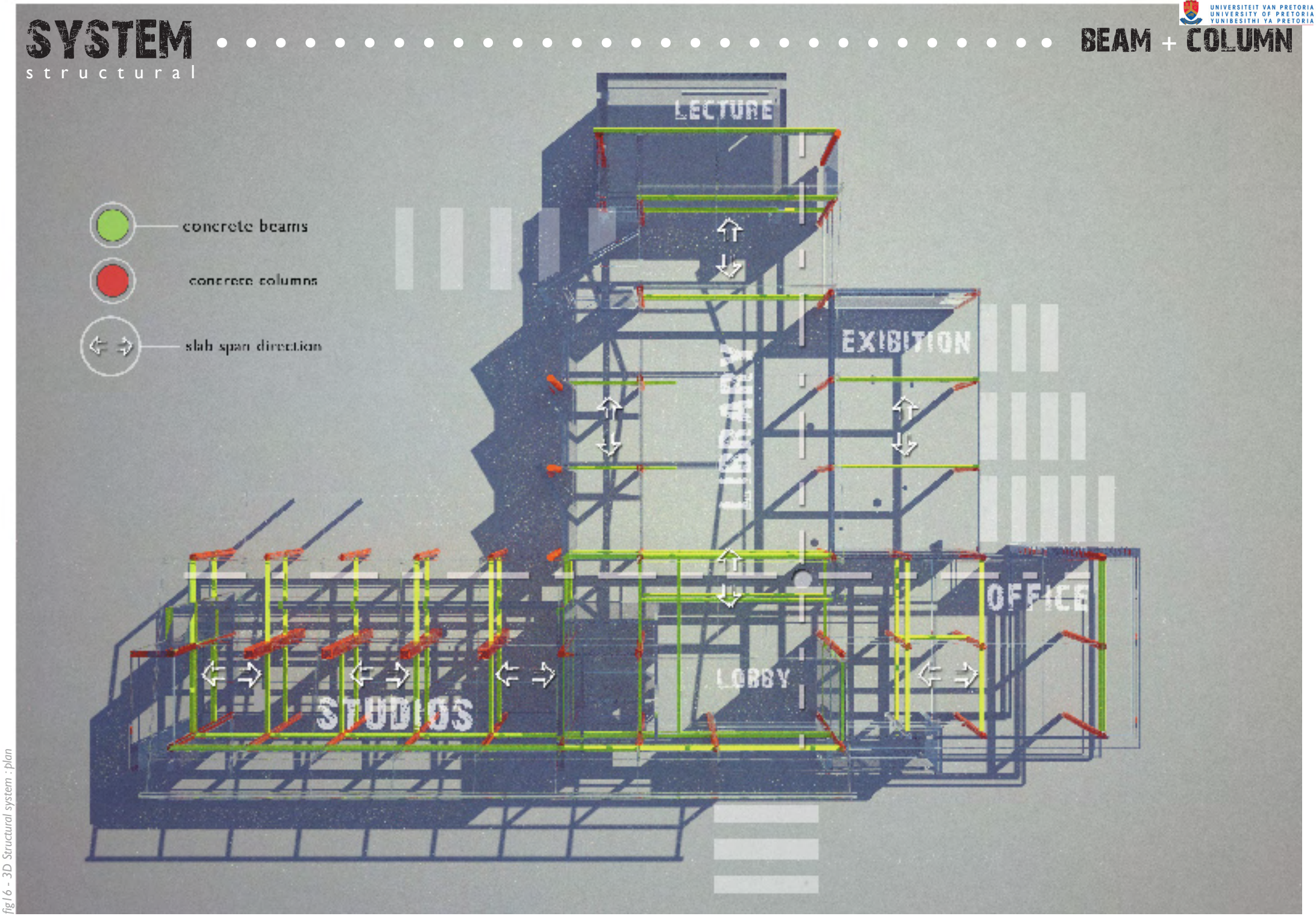
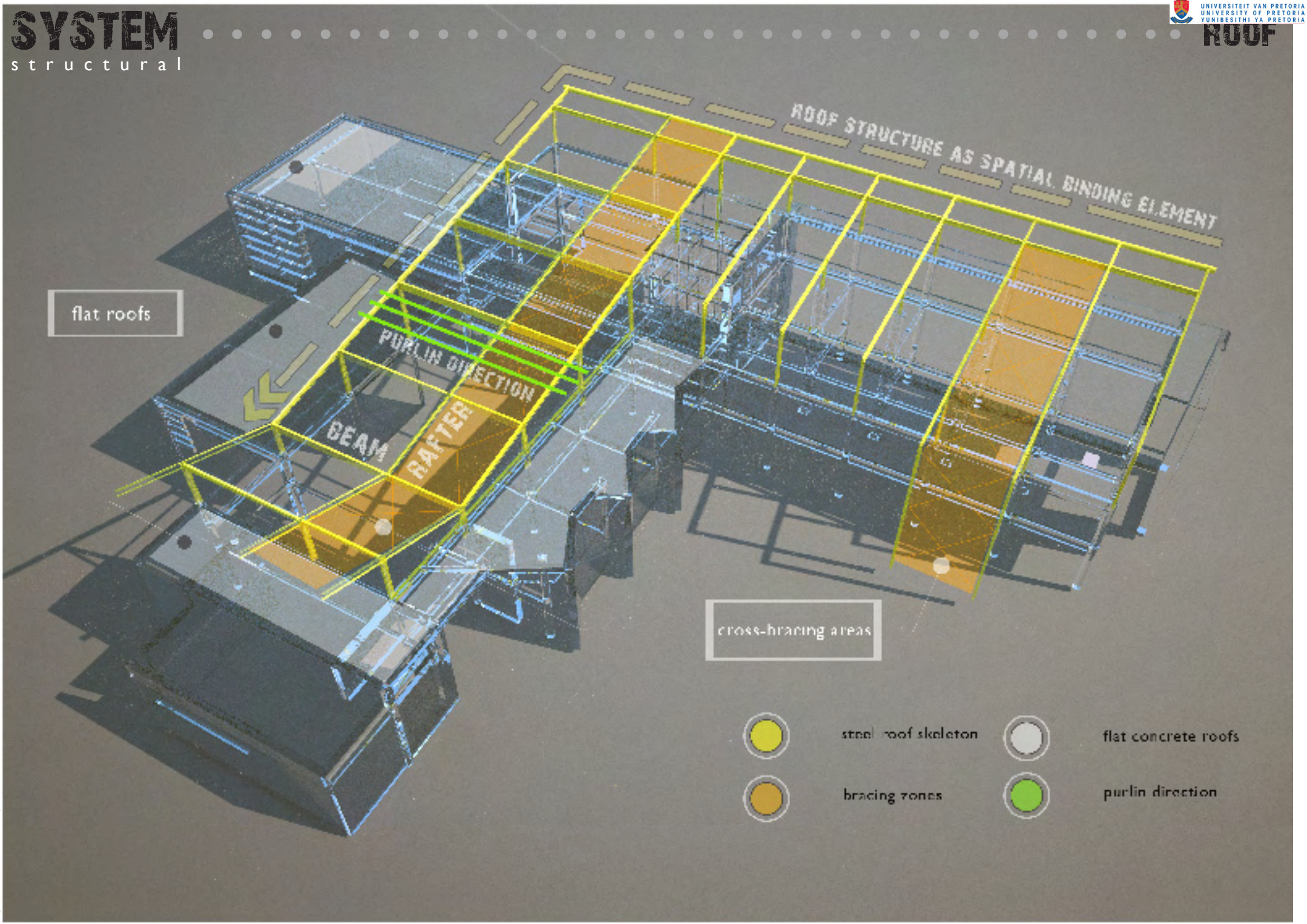


fig 16 - 3D Structural system : plan



fig|7 - 3D Structural system : Roof

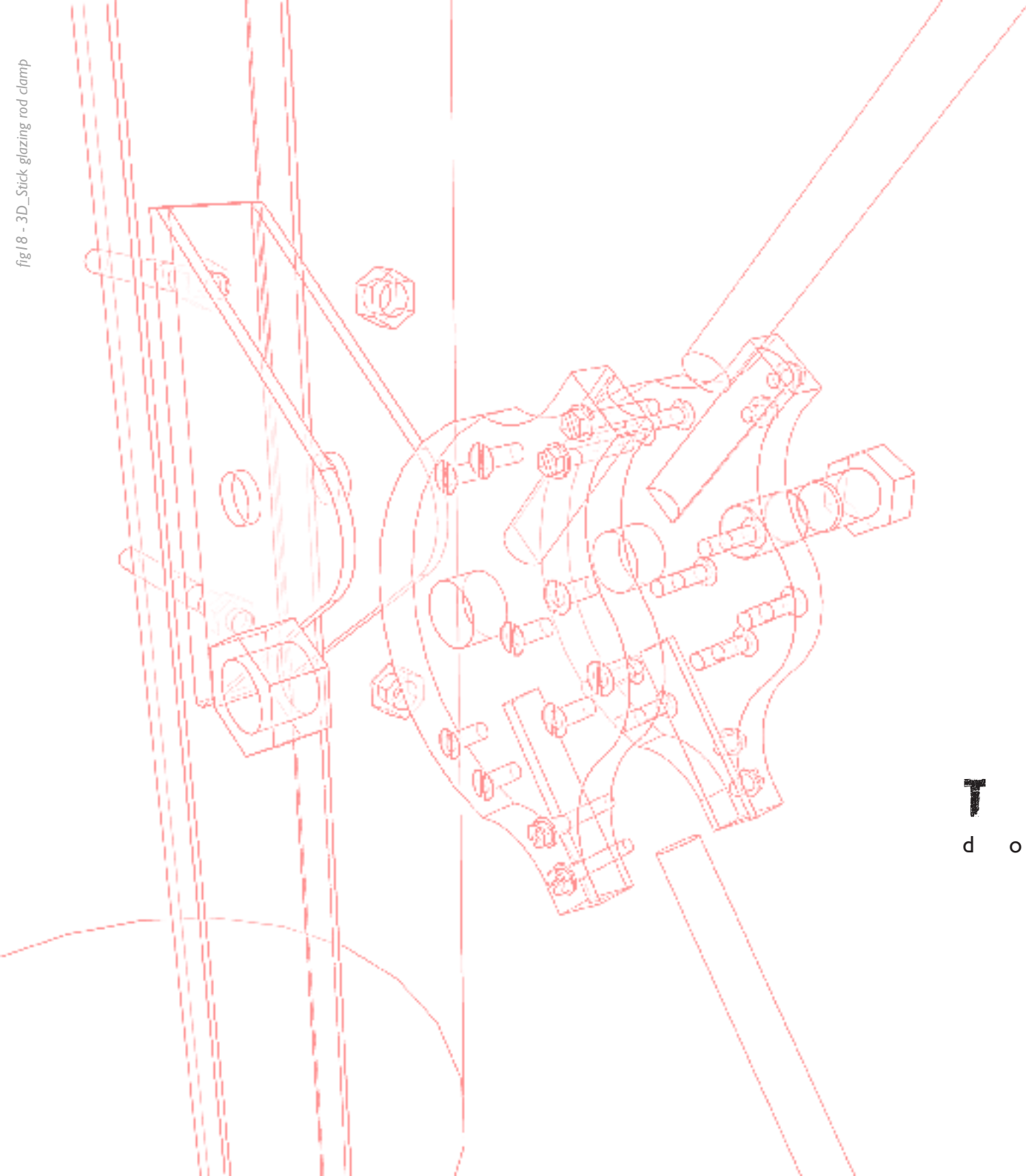
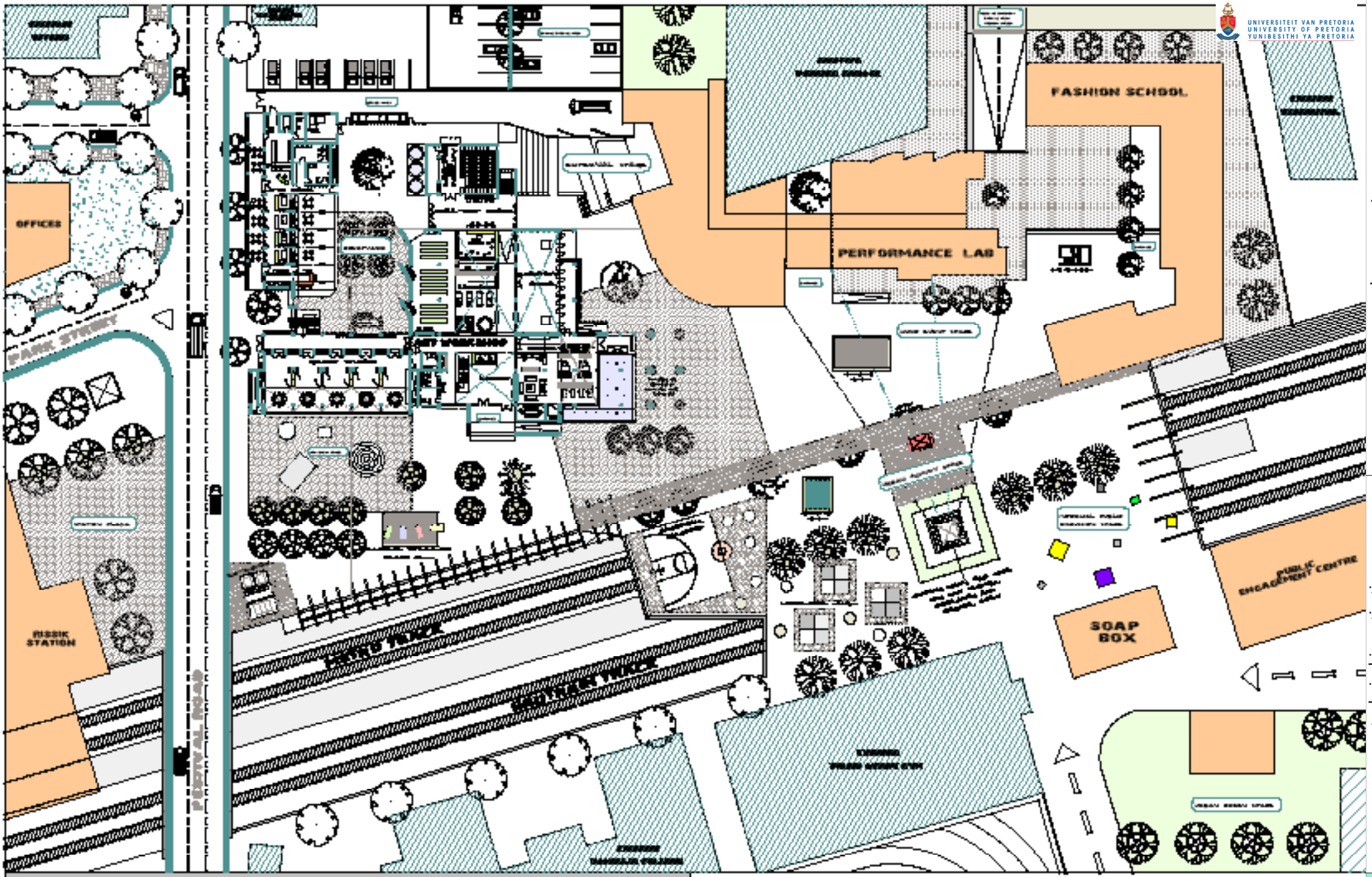


fig 18 - 3D_Stick glazing rod clamp

TECHNICAL
documentation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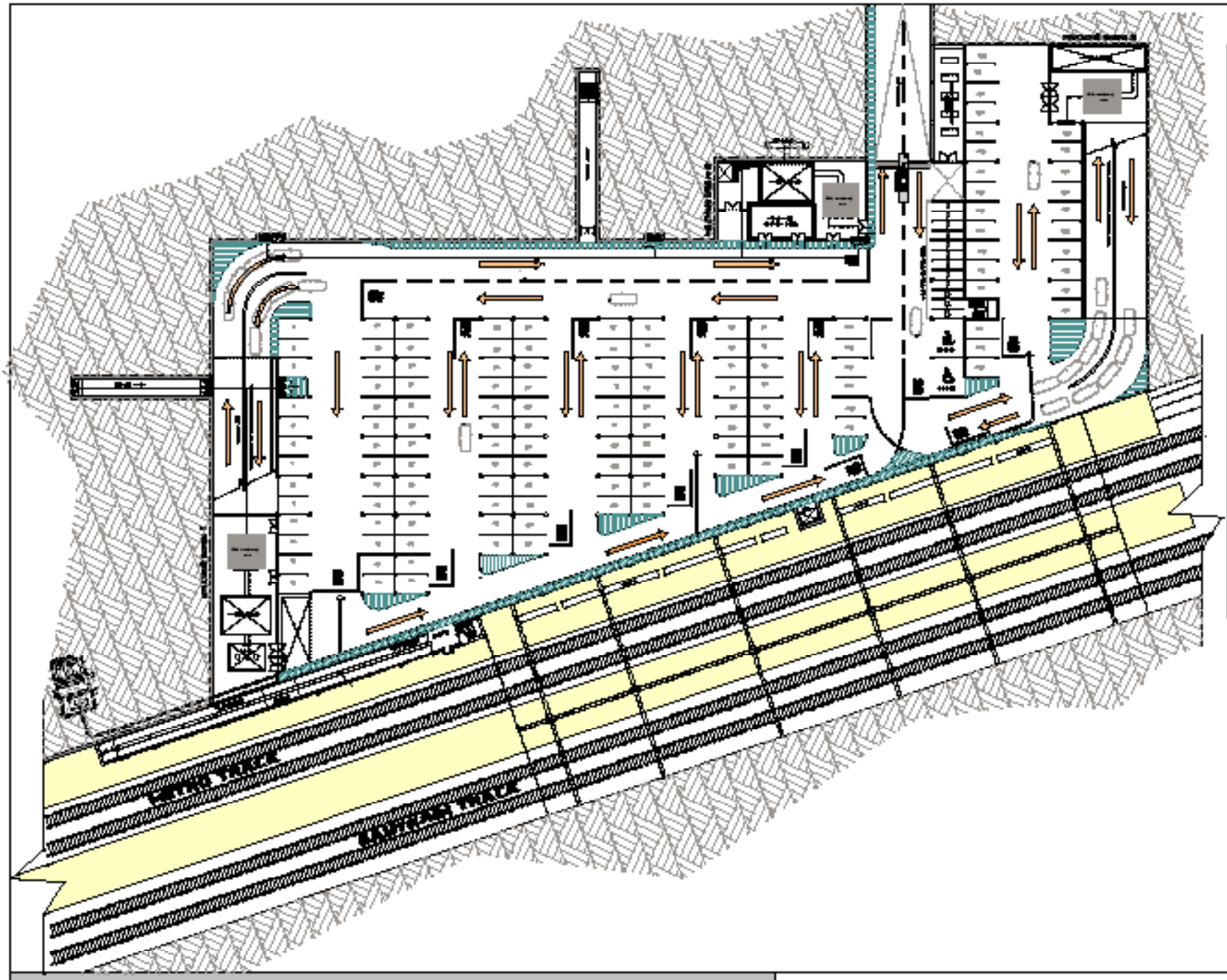
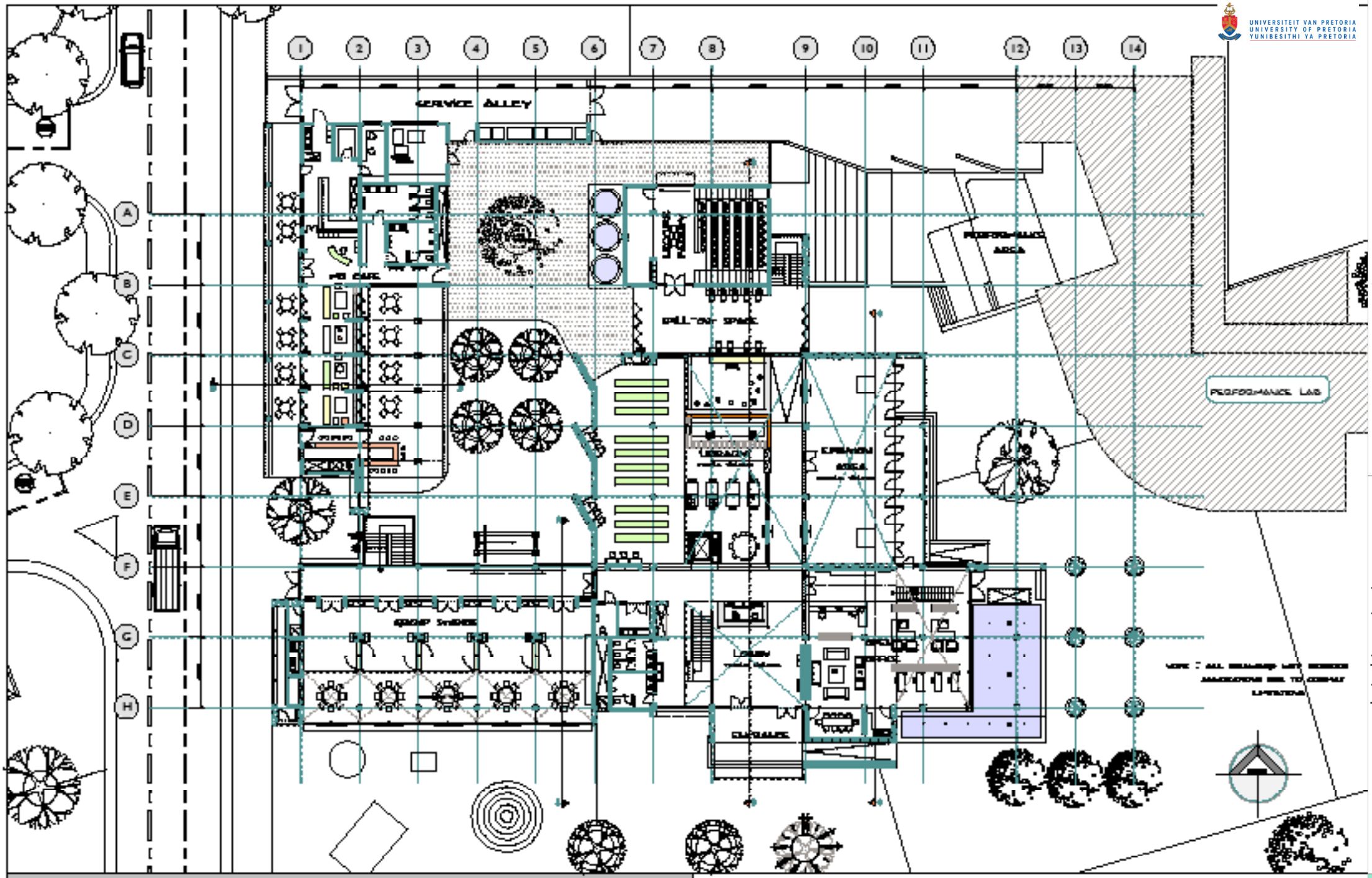
FASHION SCHOOL
OFFICES
PERFORMANCE LAB
PUBLIC ENGAGEMENT CENTRE
SOAP BOX
MSSIK STATION
ART WORKSHOP
SITE PLAN
SCALE 1 :800



SUPER BASEMENT

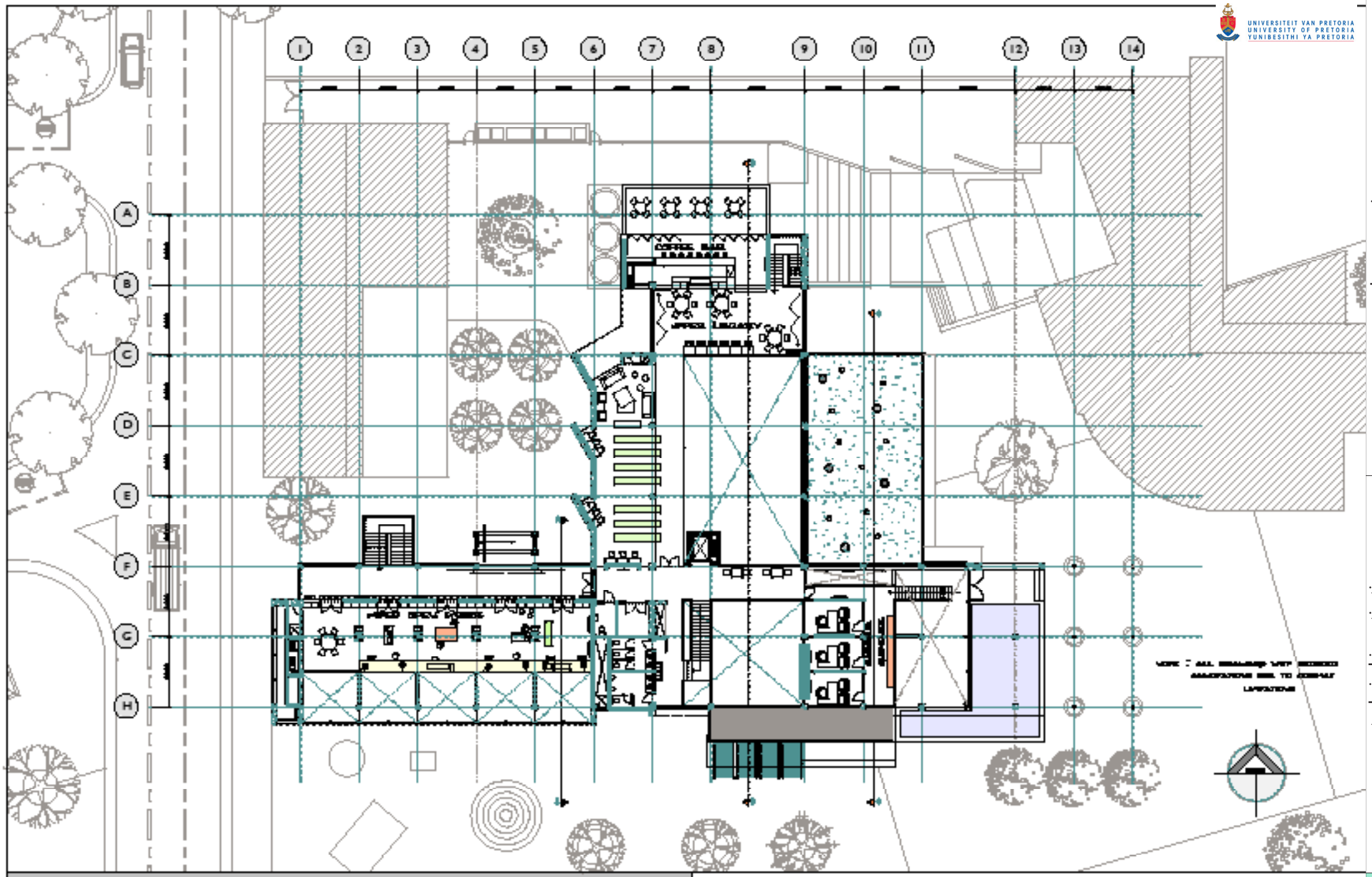
PARKING LAYOUT

SCALE 1 :800



ART WORKSHOP

GROUND FLOOR
SCALE 1:400



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ART WORKSHOP

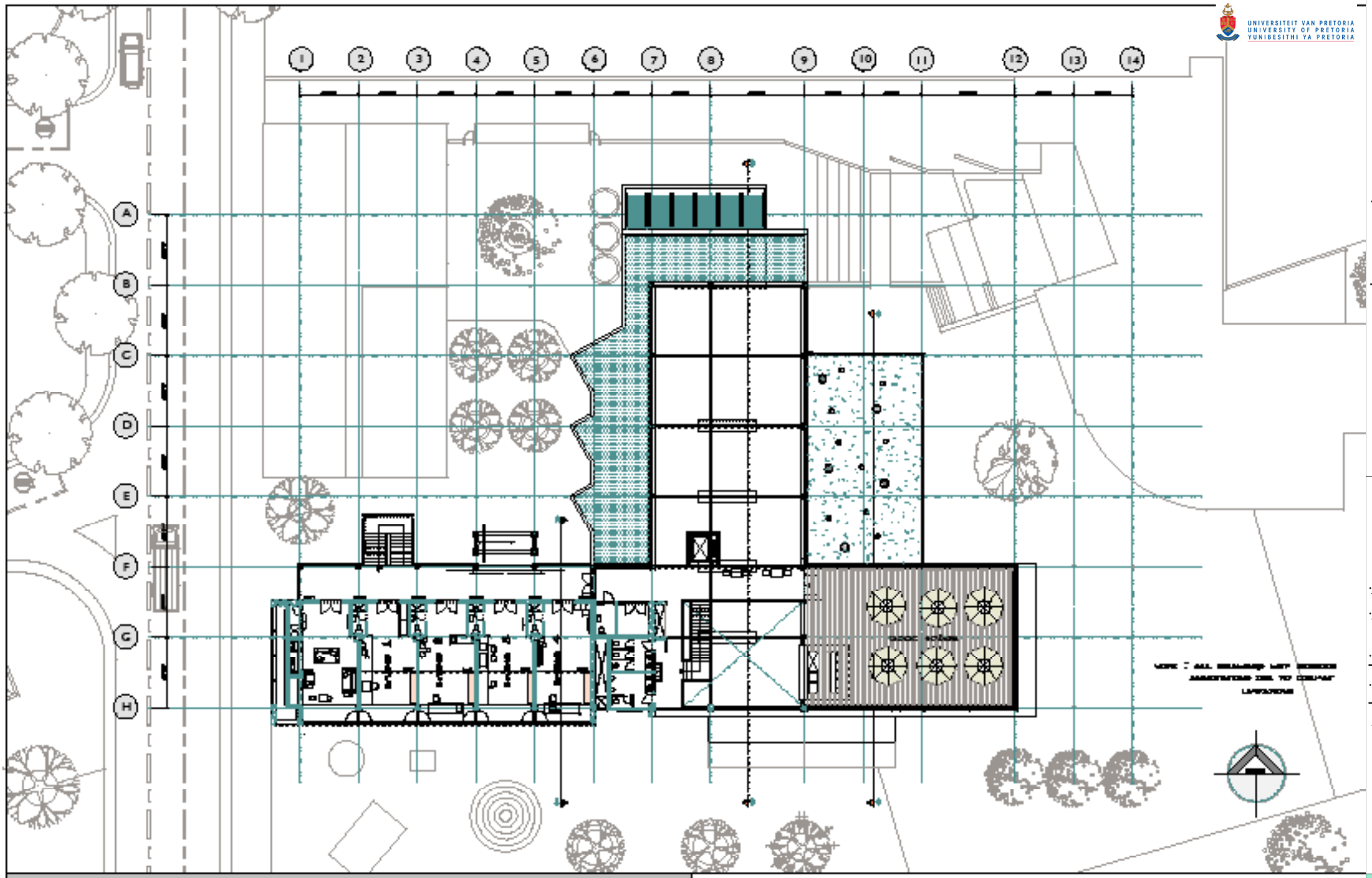
FIRST FLOOR

SCALE 1:400

documentation

technical investigation

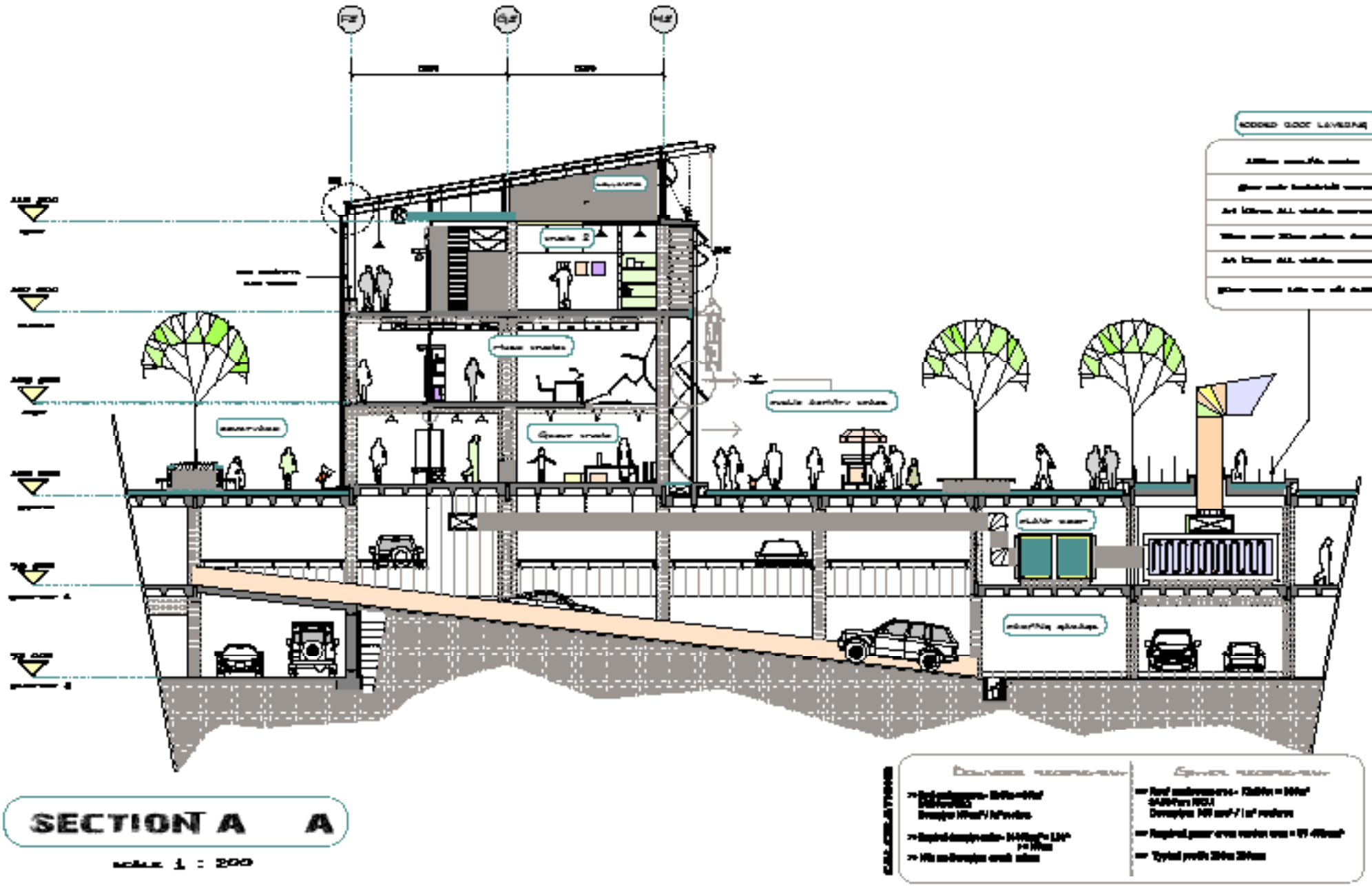
5.40



ART WORKSHOP

SECOND FLOOR

SCALE 1:400

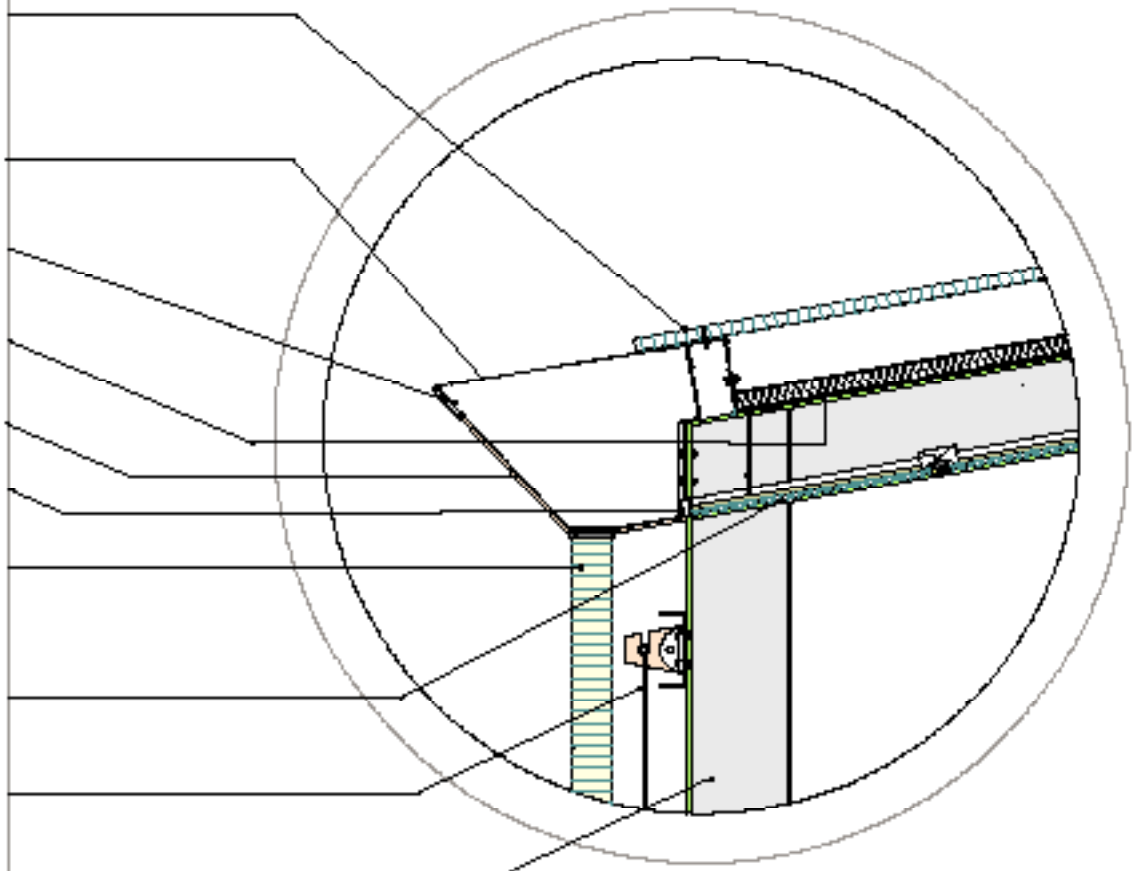


SECTION A A

scale 1 : 200

ART WORKSHOP

ROOF EDGE

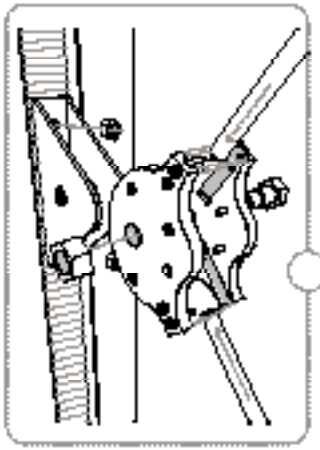


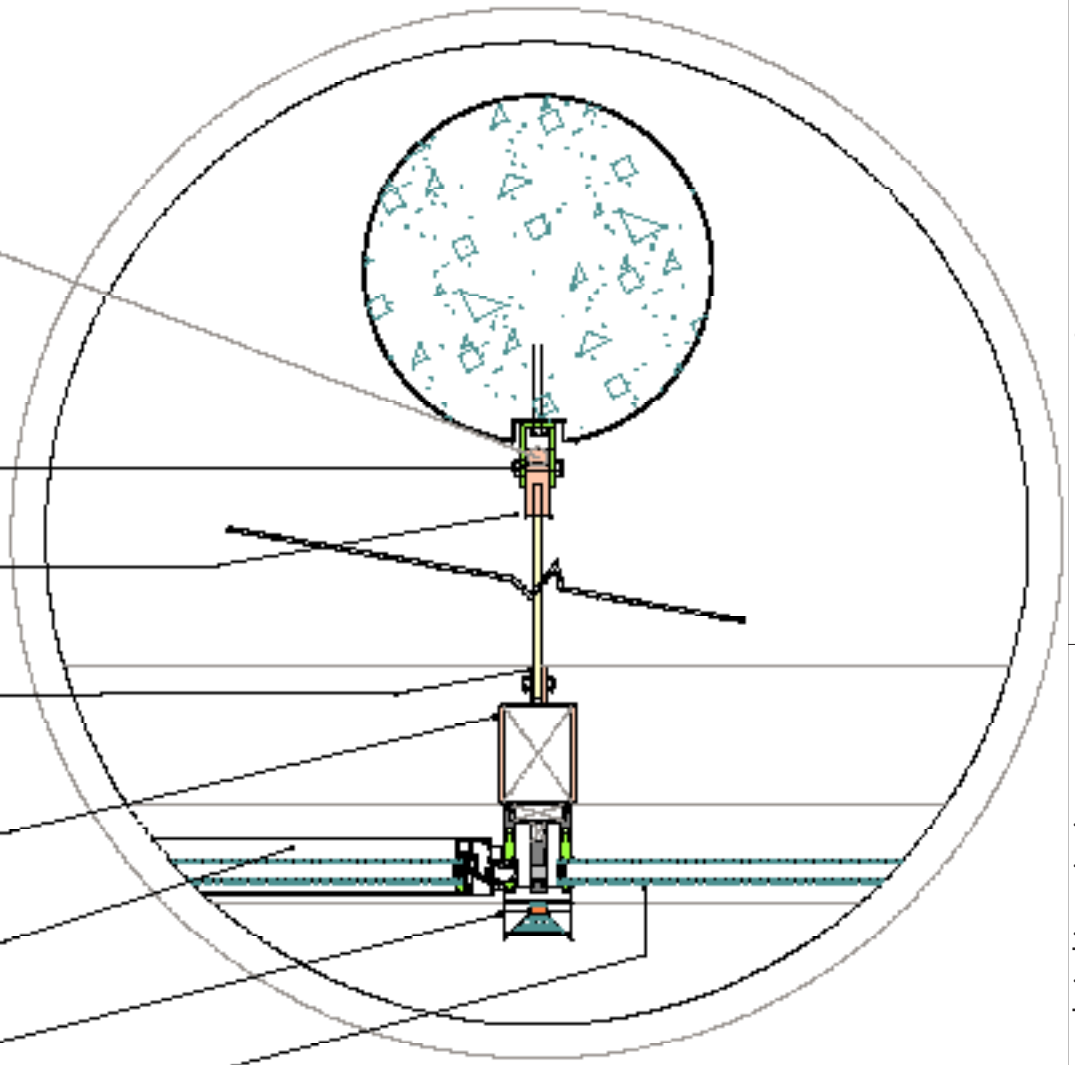
DETAIL 1

SCALE 1:20

STICK GLAZING

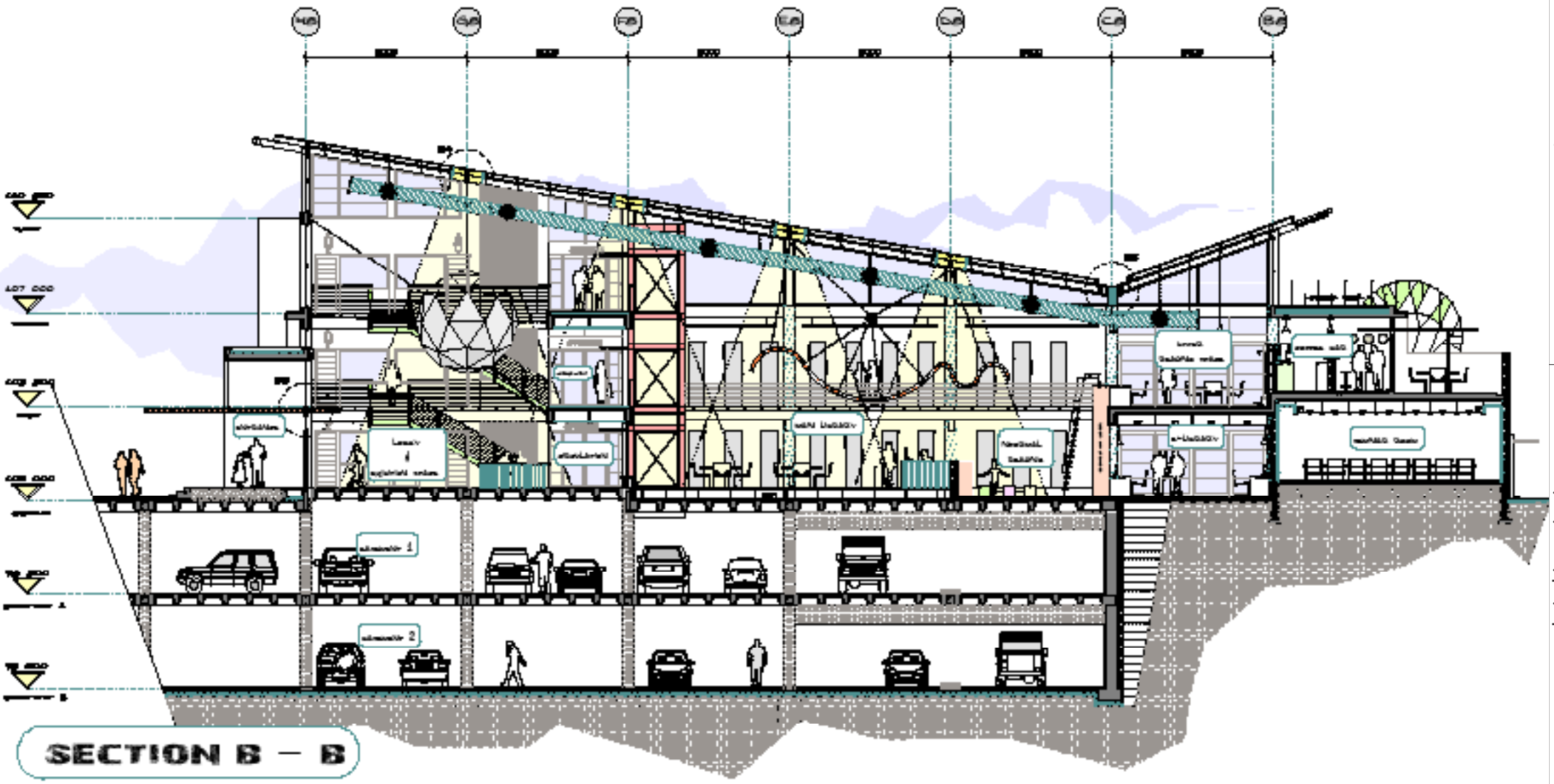
PIVOT CONNECTION





DETAIL 2

SCALE 1:10



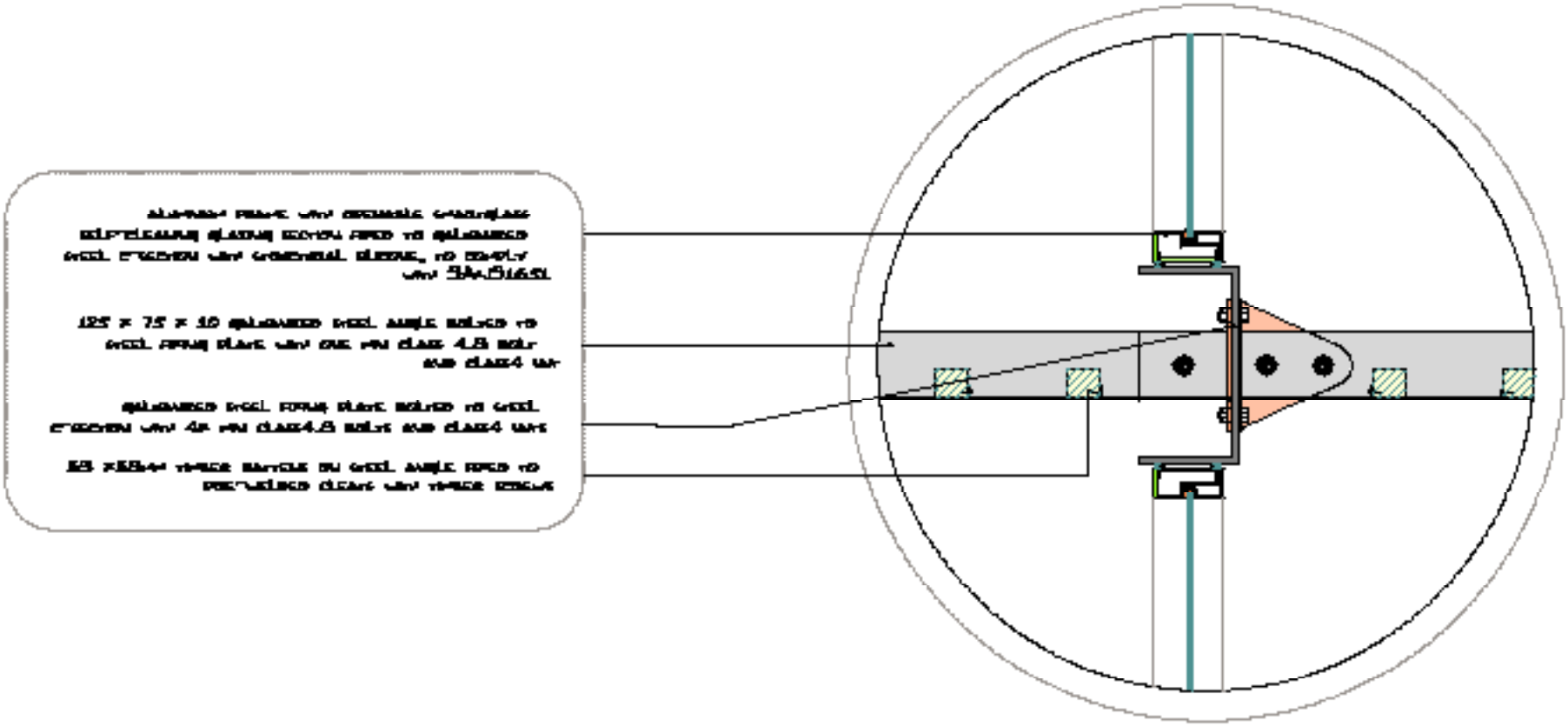
SECTION B – B

scale 1 : 200

ART WORKSHOP

LINE SCALE 1 : 200

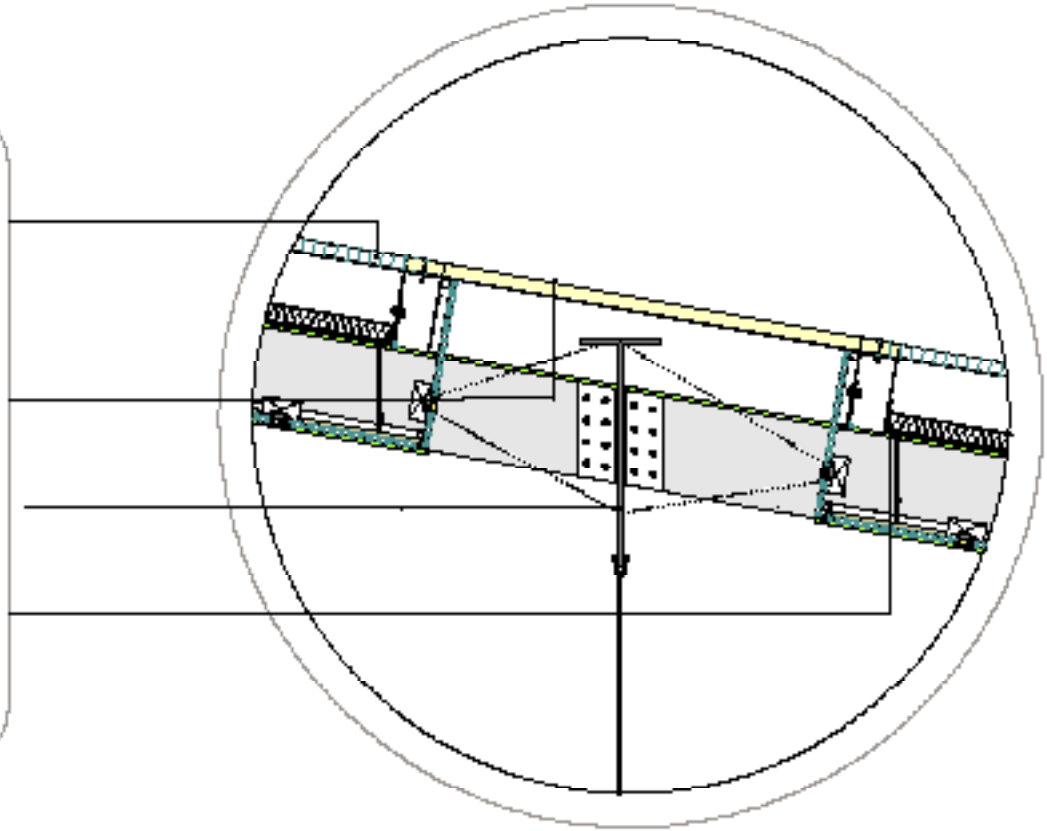
ENTRANCE CANOPY



DETAIL 3

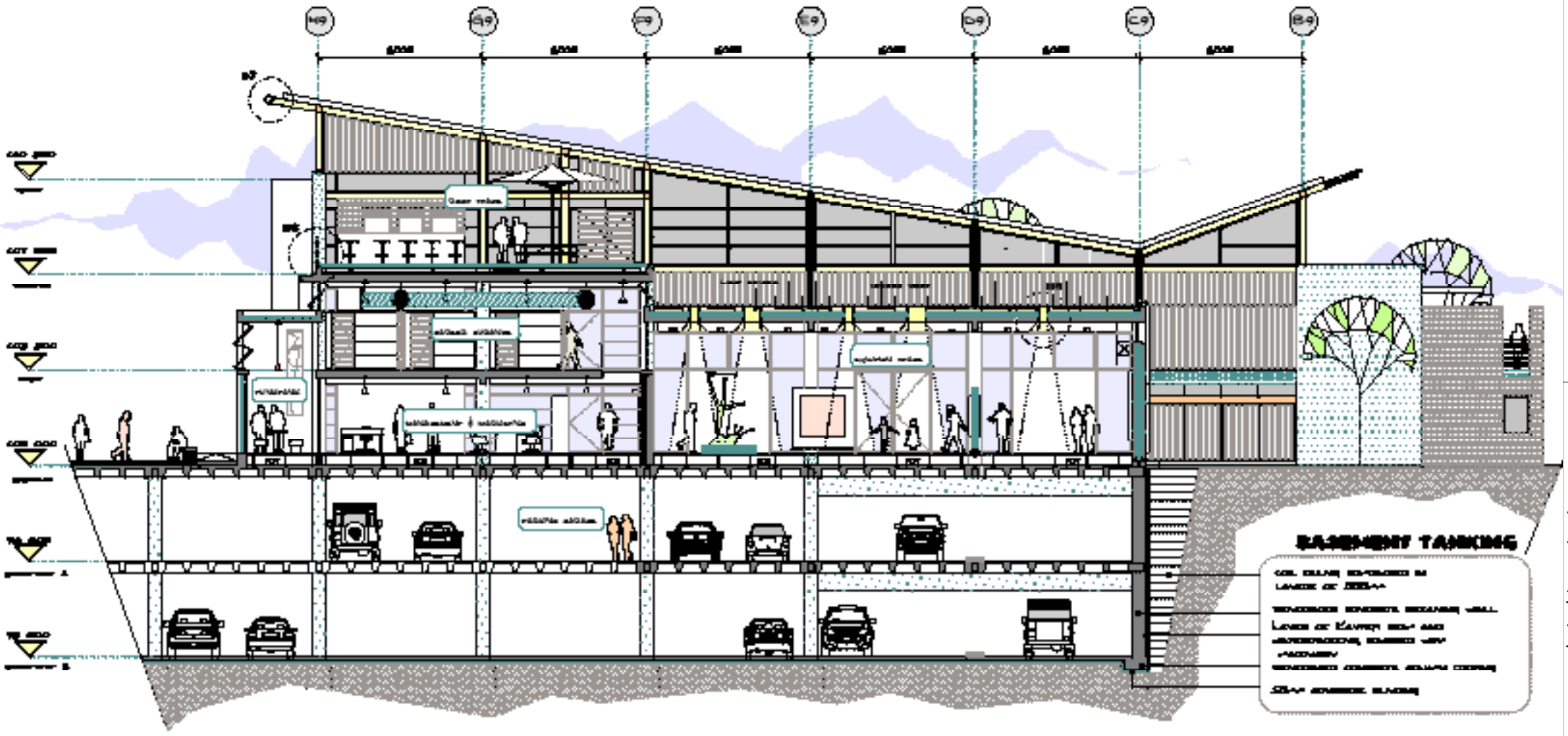
SCALE 1:10

ROOF LIGHT



DETAIL 4

SCALE 1:20



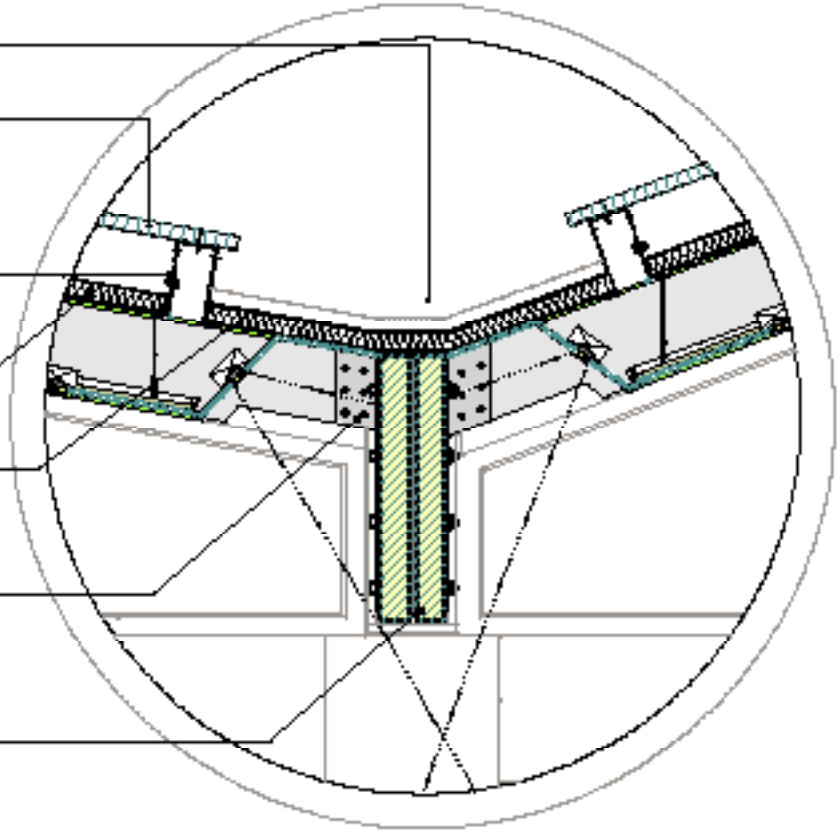
SECTION C C

scale 1 : 200

ART WORKSHOP

LINE SCALE 1 : 200

ROOF JUNCTION



DETAIL 5

SCALE 1:20

ROOF DECK

70 x 30mm galvanized steel eccentriplate hollow section handrail welded to 25mm diameter circular hollow section balusters. All non-load galvanizing to comply with SANS121, all welding to comply with SANS50001-CS1.

25mm timber planks with open joints on 50x150mm timber floor joist, fixed with 2x countersunk wood screws on each joist

25mm diameter galvanized steel circular hollow section handrail welded to 5mm galvanized steel baseplate. All welding to comply with SANS50001-CS1.

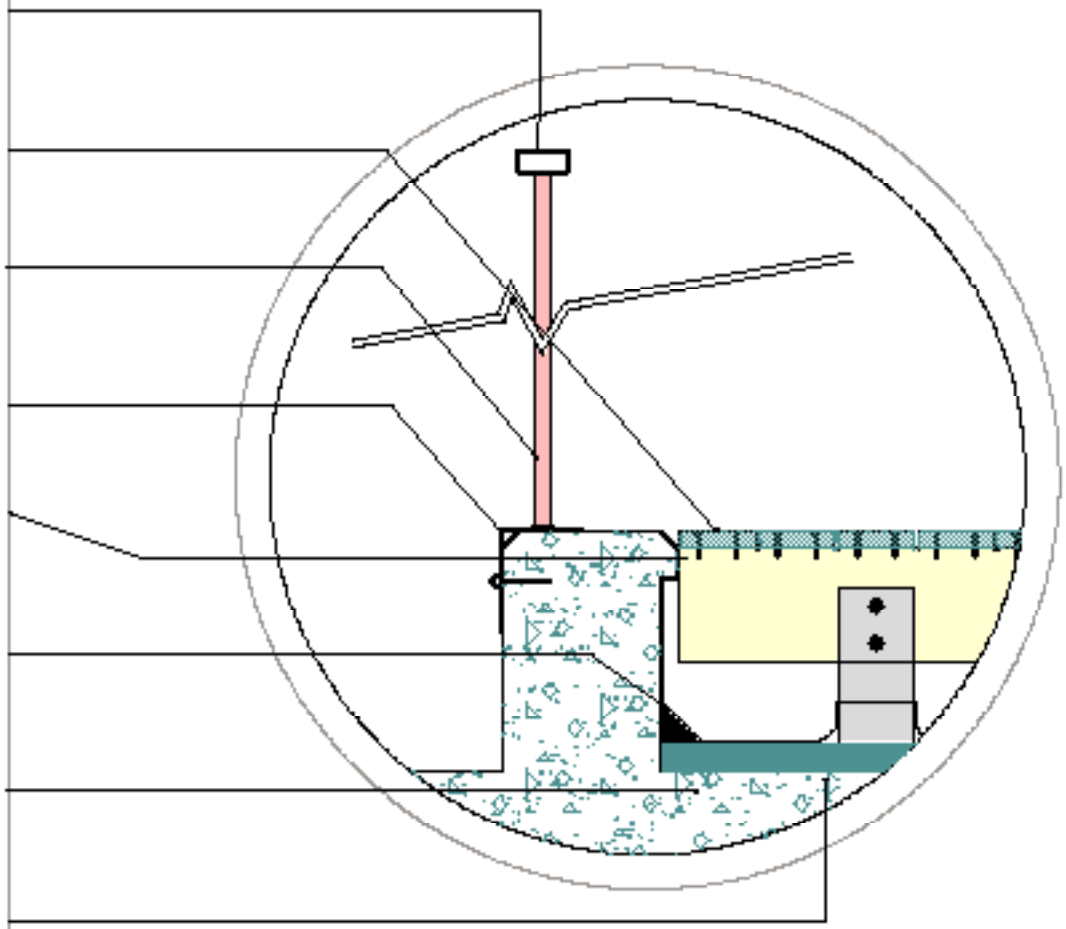
steel baseplate bolted to concrete upstand with chemset bolts @ 1m centres

timber joist bolted to galvanized steel bracket with 2x M10 class4.8 bolts and class4 nuts.

Layer of Kamaka 800m on polyester reinforced bitumen membrane waterproofing, all details to receive waterproofing to comply with SANS10021

reinforced concrete slab to comply with SANS10100, min 40mm screed, slab to gradient of 1:50 (NBR 13.5) to outlets

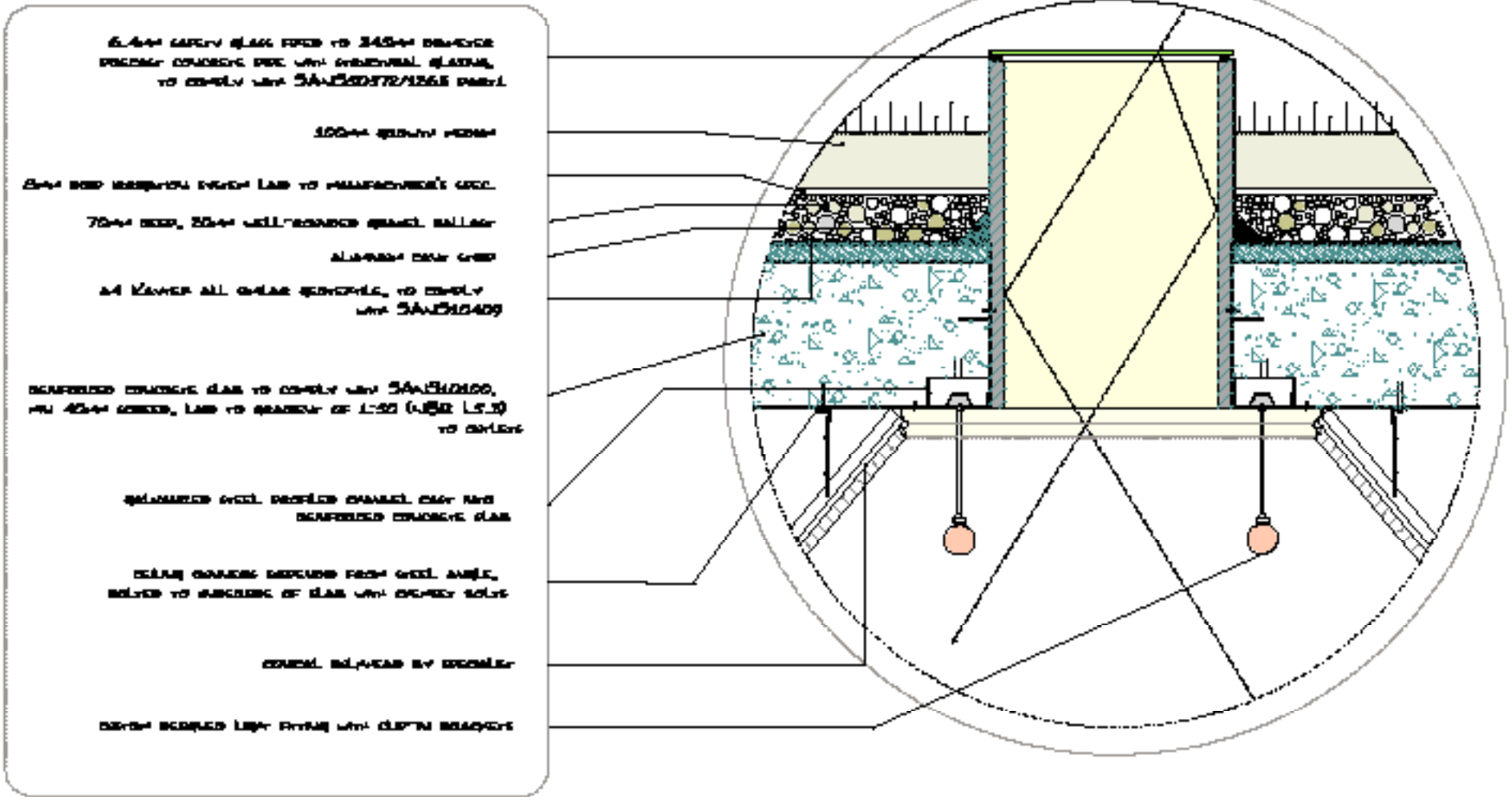
galvanized steel retaining bracket bolted to reinforced concrete slab with chemset bolts



DETAIL 6

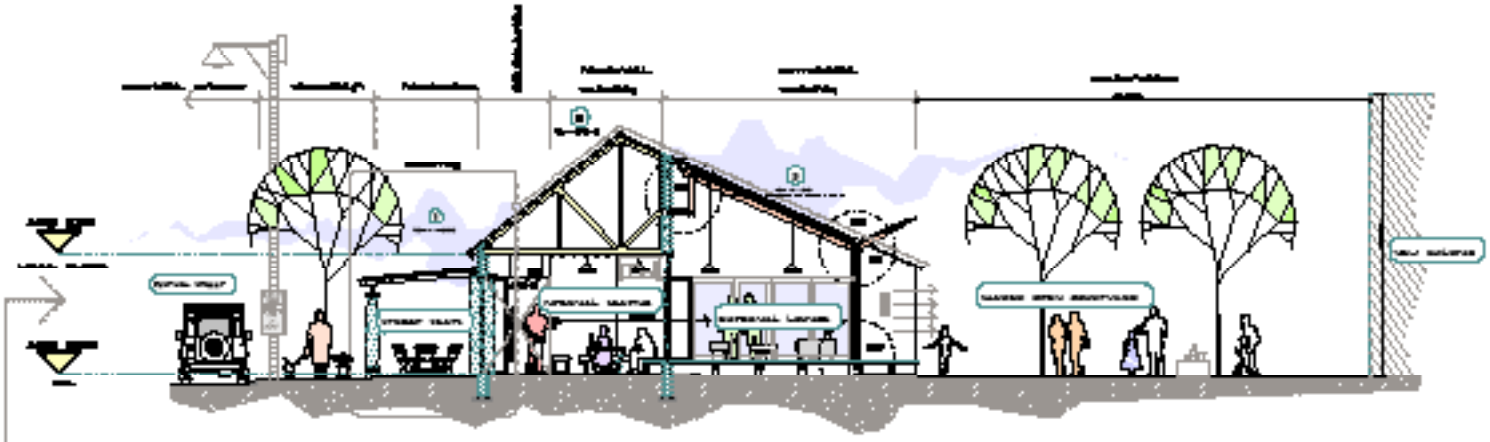
SCALE 1:10

LIGHT CANON



DETAIL 8

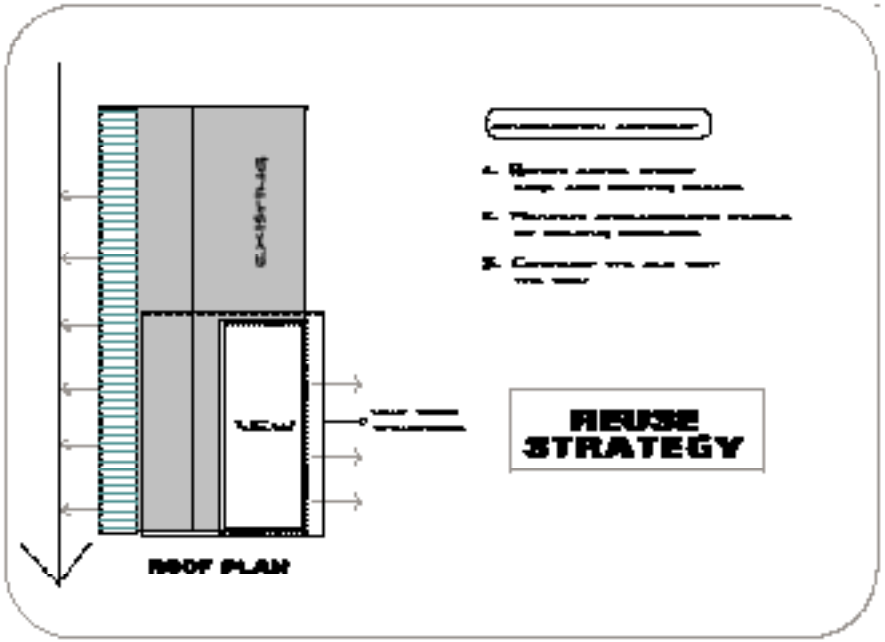
SCALE 1:10



SECTION D – D

SCALE 1 : 200

VIEW FROM FESTIVAL STREET



MO CAFE REFURBISHMENT

LINE SCALE 1:200

CARRY ARM

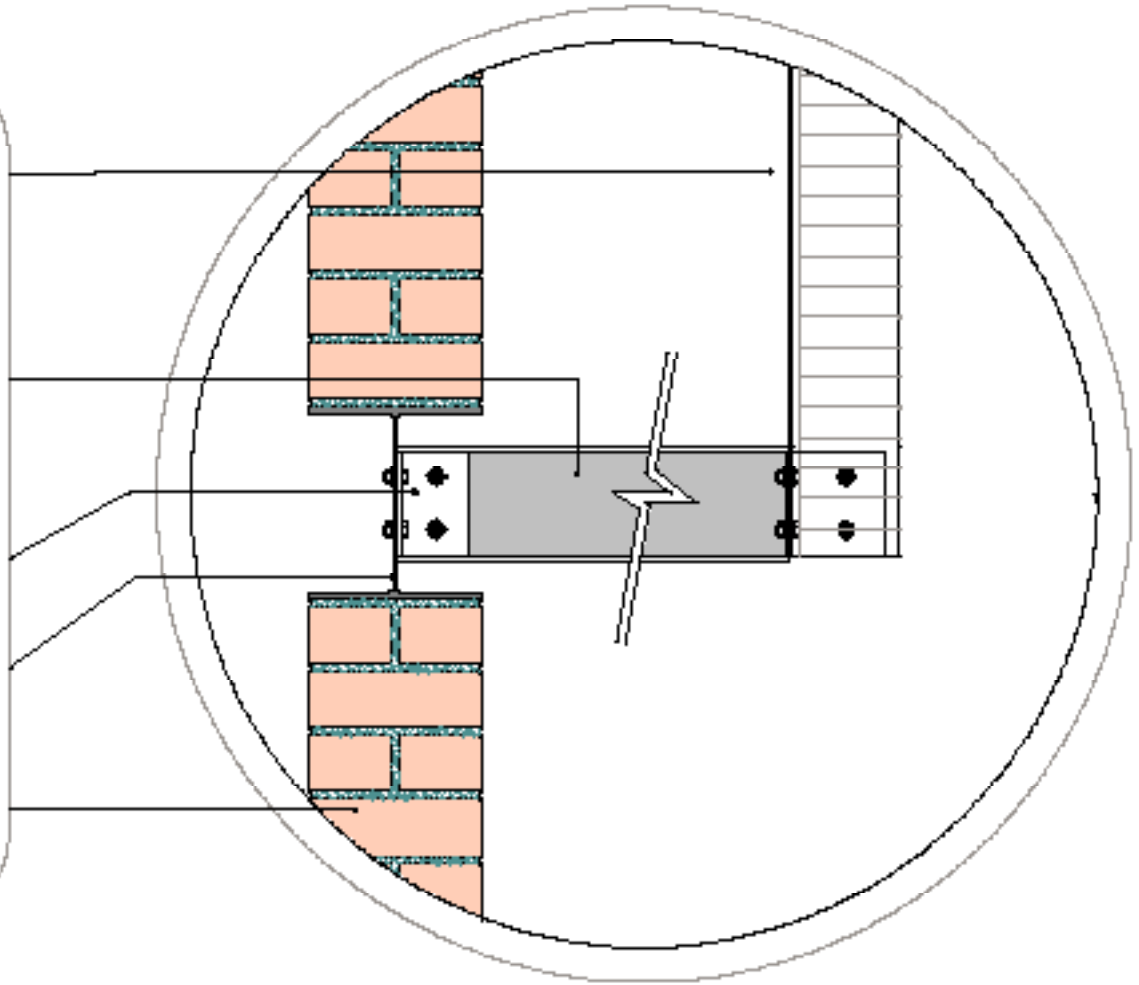
125 x 75 x 8mm steel angle, welded according to SANS10064, painted with corrosion protected paint to comply with SANS12944, bolted to steel member with 2x M16 class4.8 bolts and class4 nuts

145x100x25# steel I-section with welded cleat plate and cleated web, welded according to SANS10064, painted with corrosion protected paint to comply with SANS12944, bolted to I-member with gusset plates with 2x M16 class4.8 bolts and class4 nuts. All welding to comply with SANS0001-C54

Galvanized steel gusset plates bolted to steel member with 4x M16 class4.8 bolts and class4 nuts

254 x 230 x25# steel I-section, welded according to SANS10064, painted with corrosion protected paint to comply with SANS12944, built into 230mm masonry wall. Movement joint to comply with SANS10249

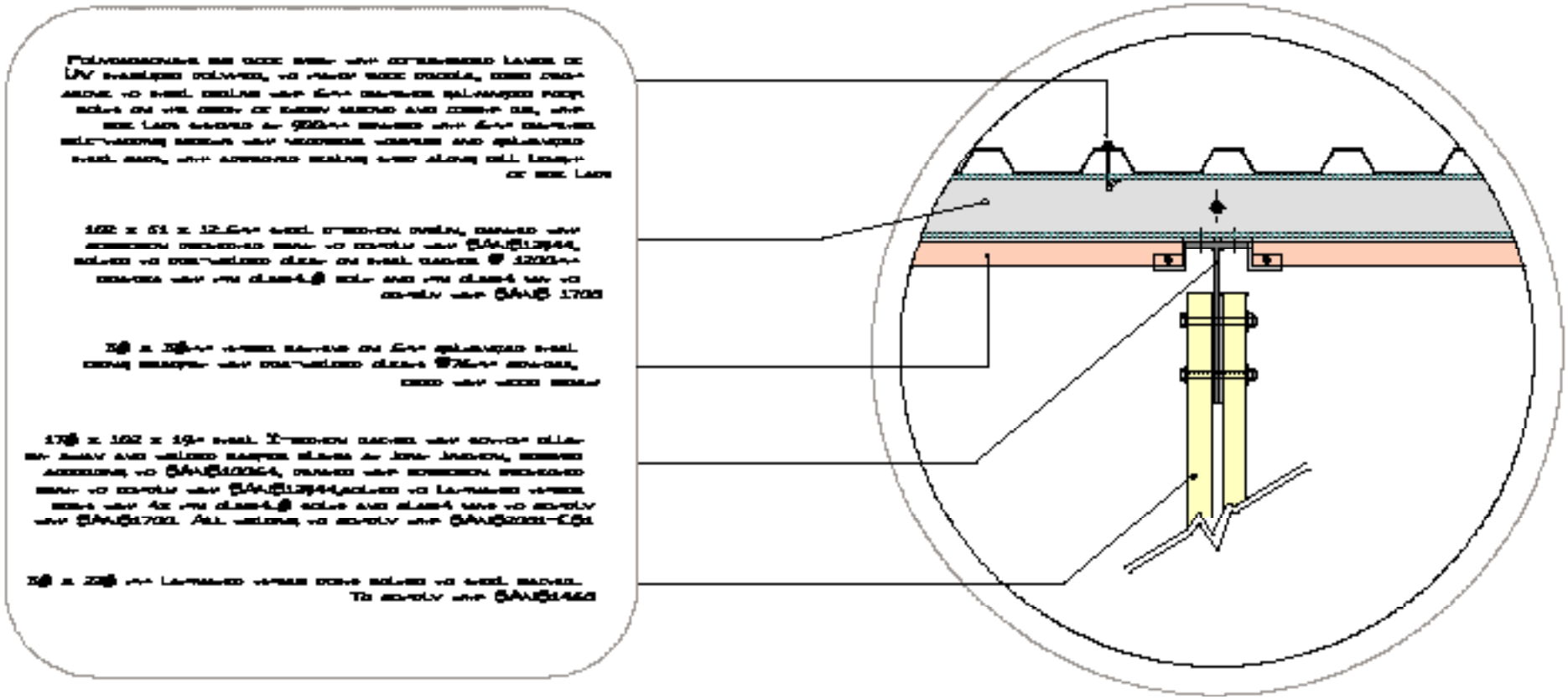
250mm masonry wall, laid in stretcher bond with a double cavity wall layer, to comply with SANS10249



DETAIL 9

SCALE 1:10

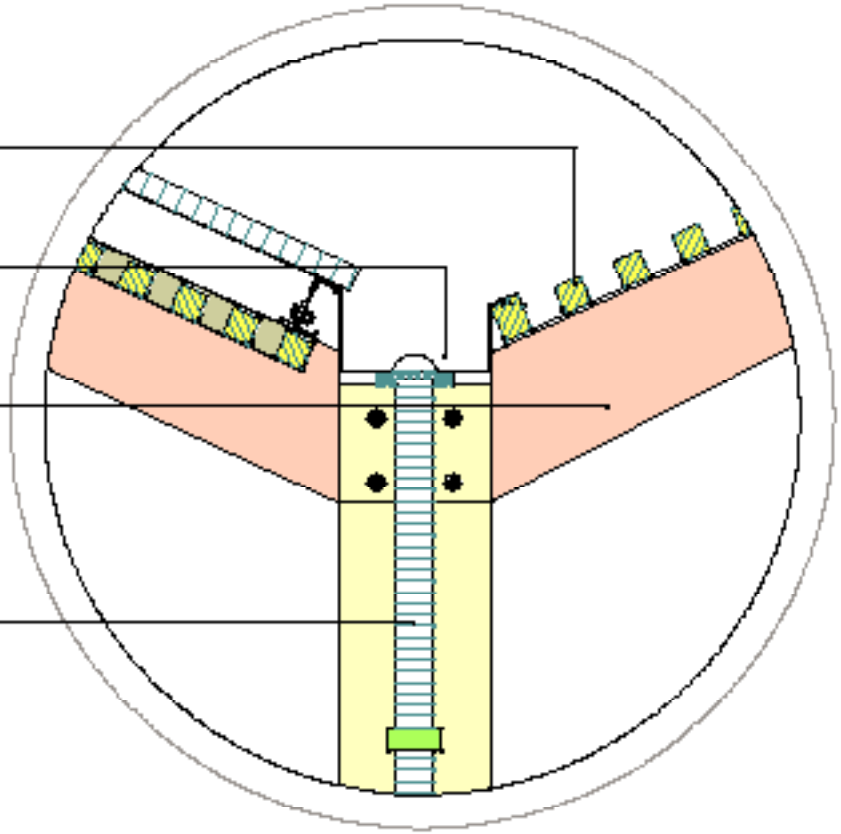
RAFTER TO POST



DETAIL 10

SCALE 1:10

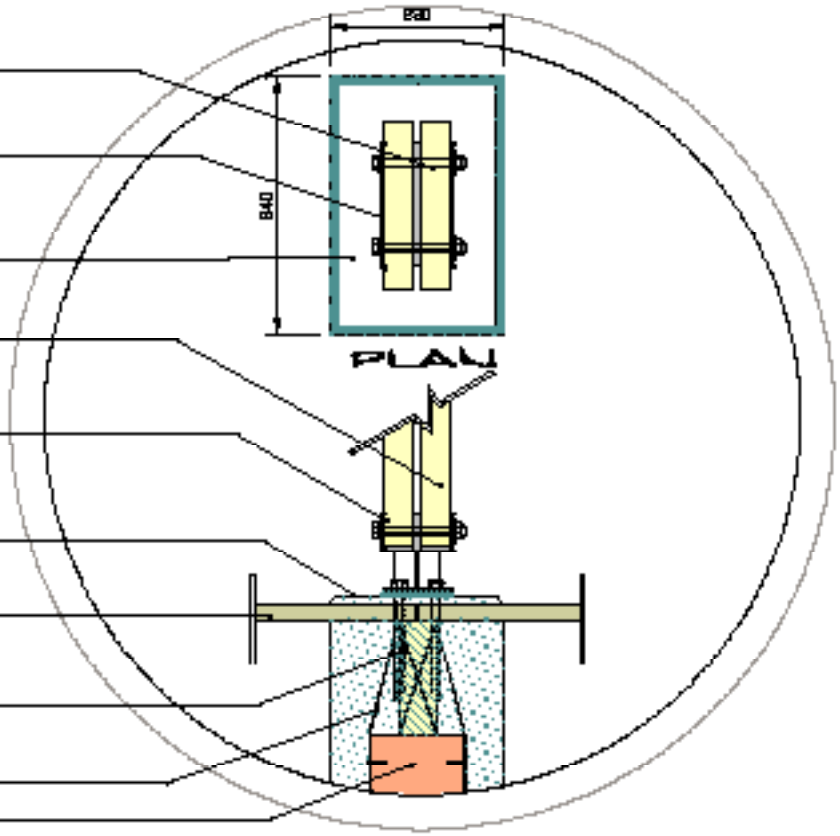
RAFTER JUNCTION



DETAIL 11

SCALE 1:10

POST TO FOOTING



DETAIL 12

SCALE 1:10