

P5 PRESENTATION

SCHEME #43

1- the assignment

2- location

3- masterplan

4- design

4.1 concept

4.2 program

4.3 construction

4.4 installations

4.5 elevations

5- summary

1
the assignment

1968 : Club of Rome border of growth rapport

1972 : United Nations Environmental Program

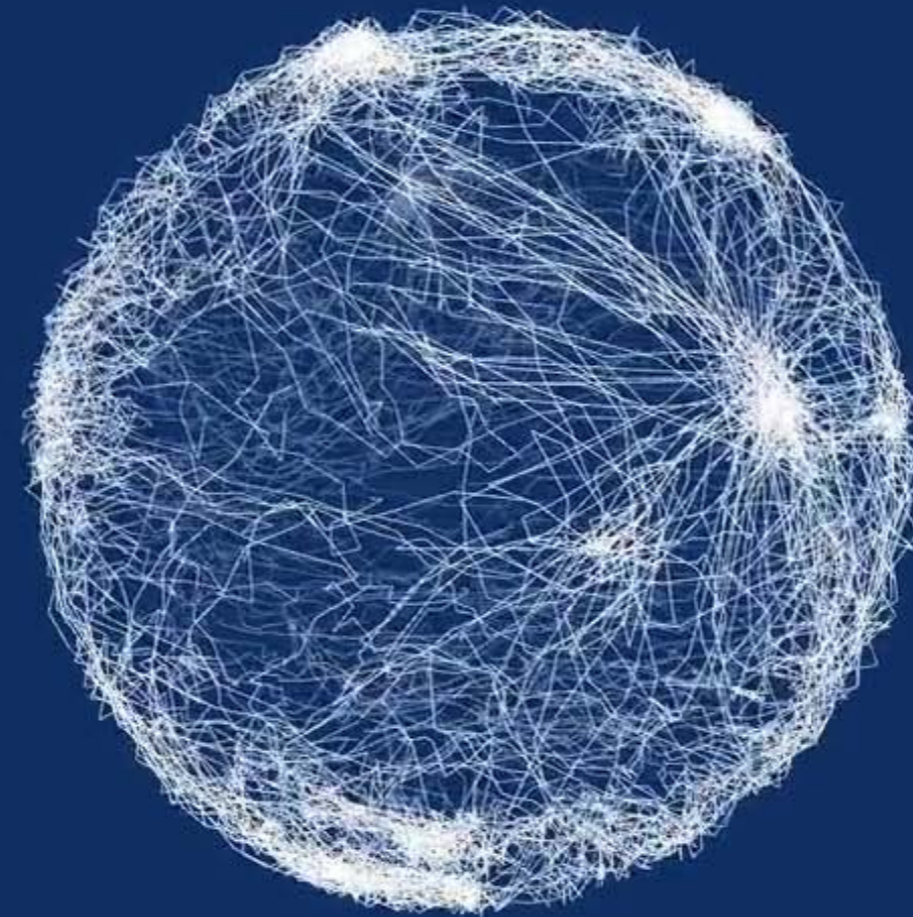
1987: Brundtland Commission

“sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

1992: United Nations Framework Convention on Climate Change (UNCFF)

1997: Kyoto Protocol by UNCFF

2009: UNCFF COP 15 meeting in Copenhagen



COP15
COPENHAGEN
UNITED NATIONS CLIMATE CHANGE CONFERENCE 2009

World-wide indecisiveness

" industrialised countries are unwilling to take on responsibility for **climate change**"

A polar bear is walking across a large, melting ice floe. The ice is thin and cracked, with dark water visible beneath it. The background shows a vast, open sea under a pale sky. The text 'urgent need for sustainable solutions' is overlaid in a large, white, sans-serif font across the center of the image.

urgent need
for sustainable
solutions



demand for environmental regulatory processes



United Nations



united nations:

193 affiliated countries

mandate for action



International Court of Justice

THE HAGUE



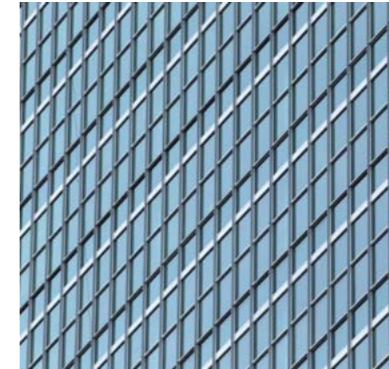
General Assembly



Security Council



Economic & Social Council



Secretariat

MANHATTAN

the UN consists out of 5 councils with goals for international peace, protecting human rights and better living standards



International Court of Justice

THE HAGUE



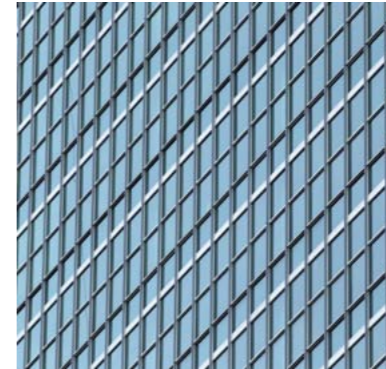
General Assembly



Security Council



Economic & Social Council



Secretariat



Environmental Council

MANHATTAN

a new 6th council for the united nations, propagating sustainability to the world

how?

UNEC

Four missions

collect	research material
produce	policies
propagate	to citizens
exchange	knowledge to countries

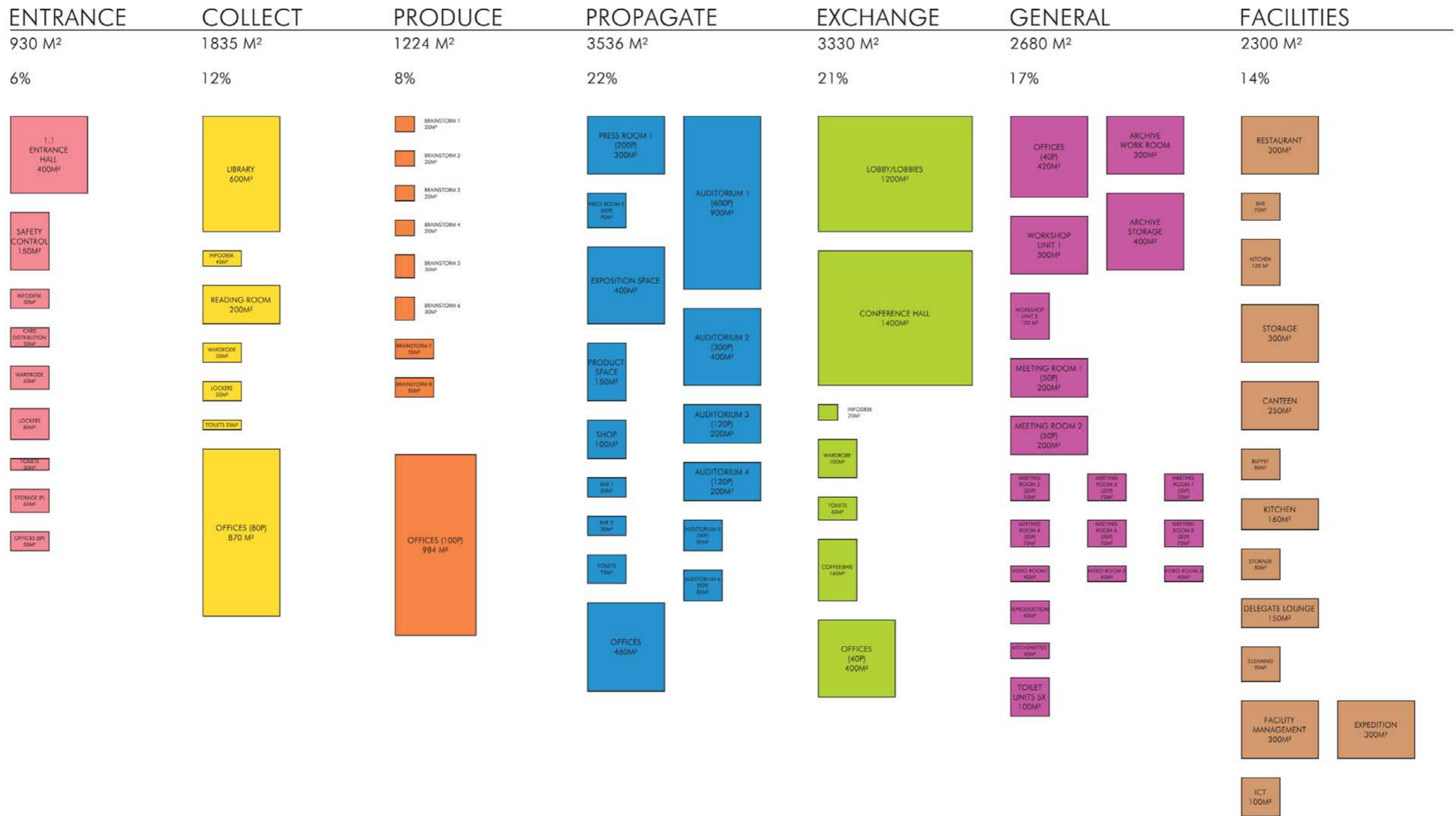
UNEC

Four missions

- | | |
|------------------|------------------------|
| collect | research material |
| produce | policies |
| propagate | to citizens |
| exchange | knowledge to countries |

- | |
|--------------|
| LIBRARY |
| OFFICES |
| AUDITORIA |
| COUNCIL ROOM |

the assignment - program

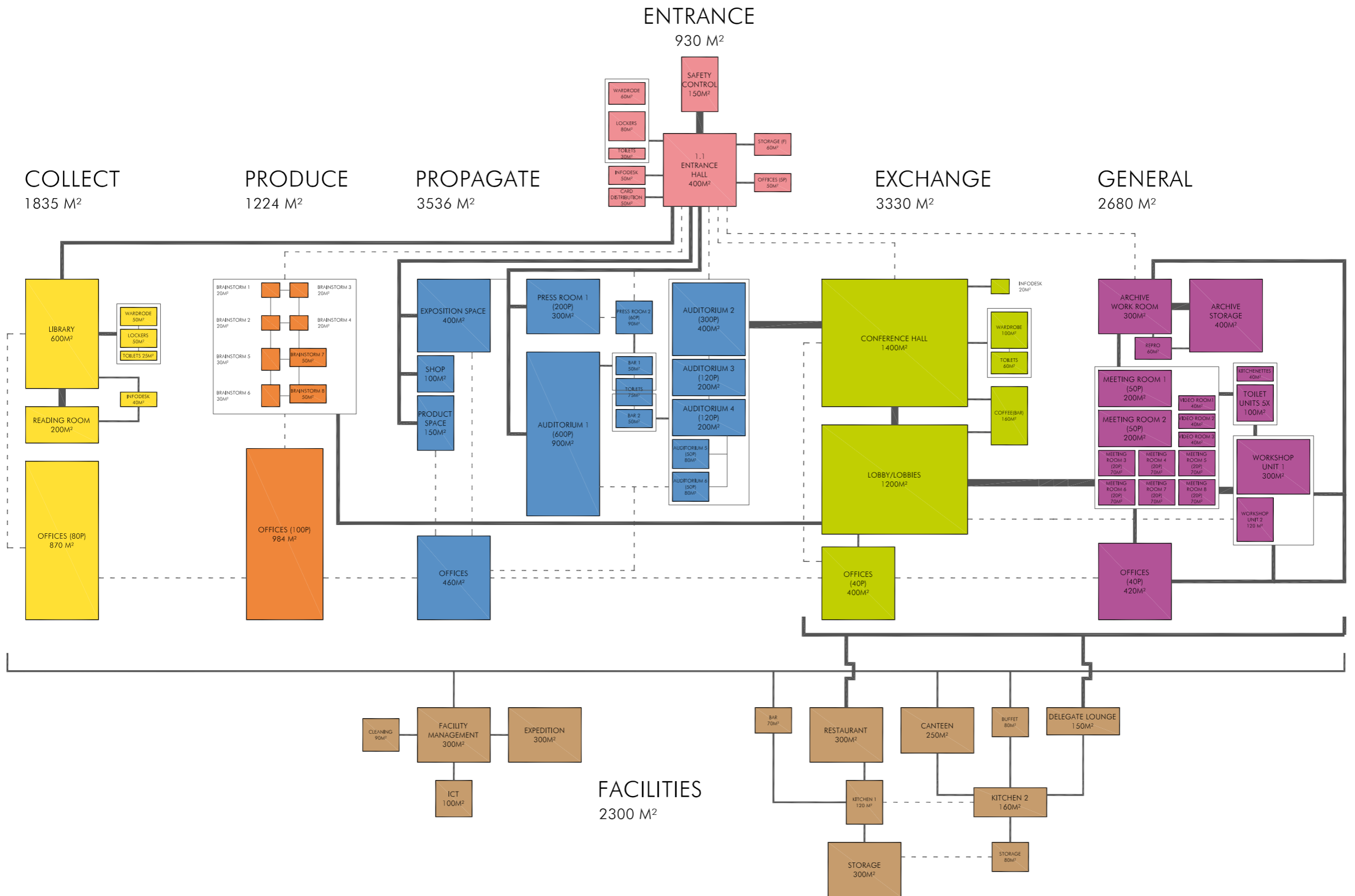


PROGRAMME DEVELOPMENT | INTERDISCIPLINARY COLLABORATION

TOTAL PROGRAM
15.835 M²

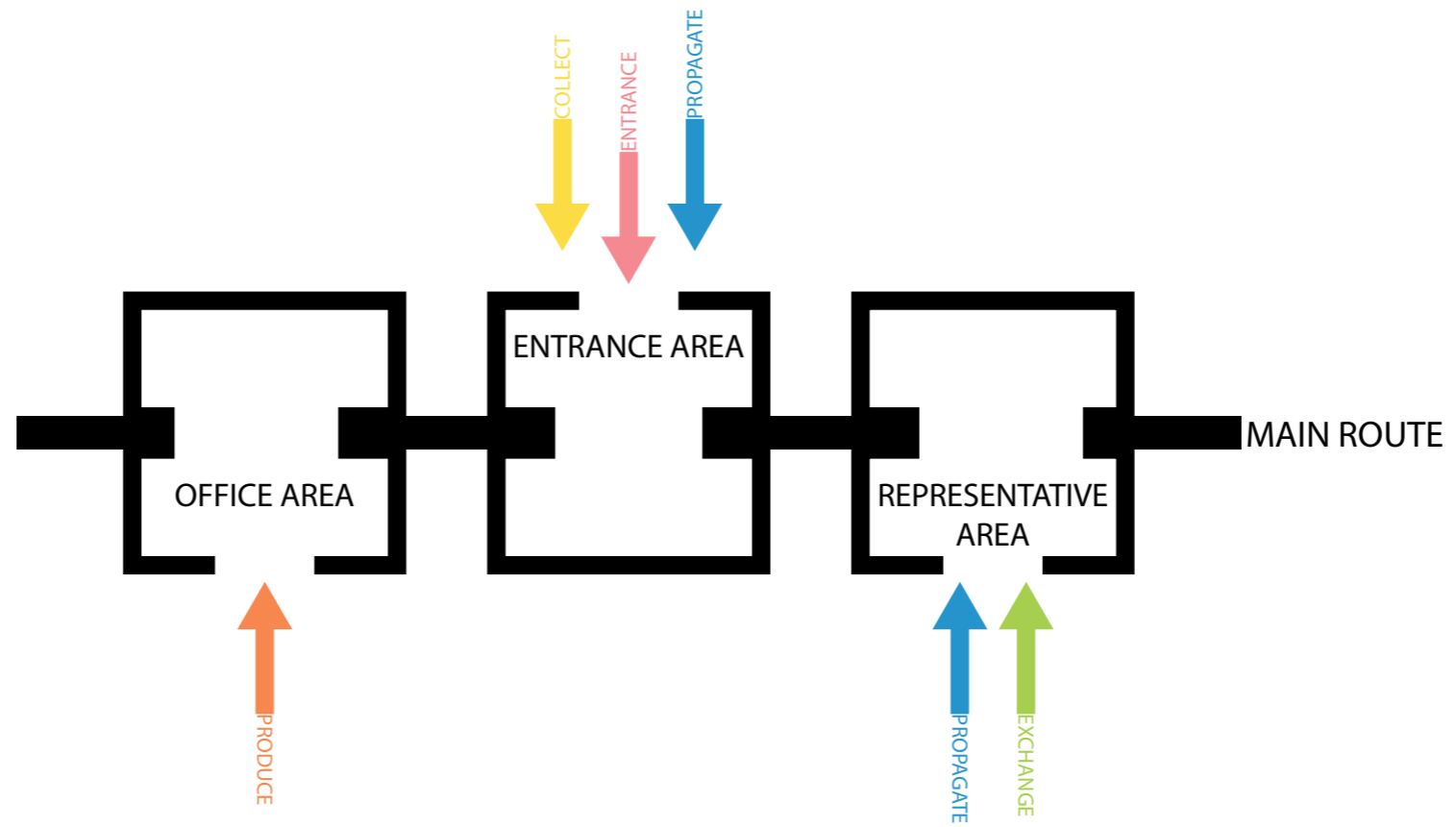


the assingment - program



PROGRAM DISTRIBUTION | SORT BY CONNECTIONS | SCALE 1:1000

TOTAL PROGRAM
15.835 M²



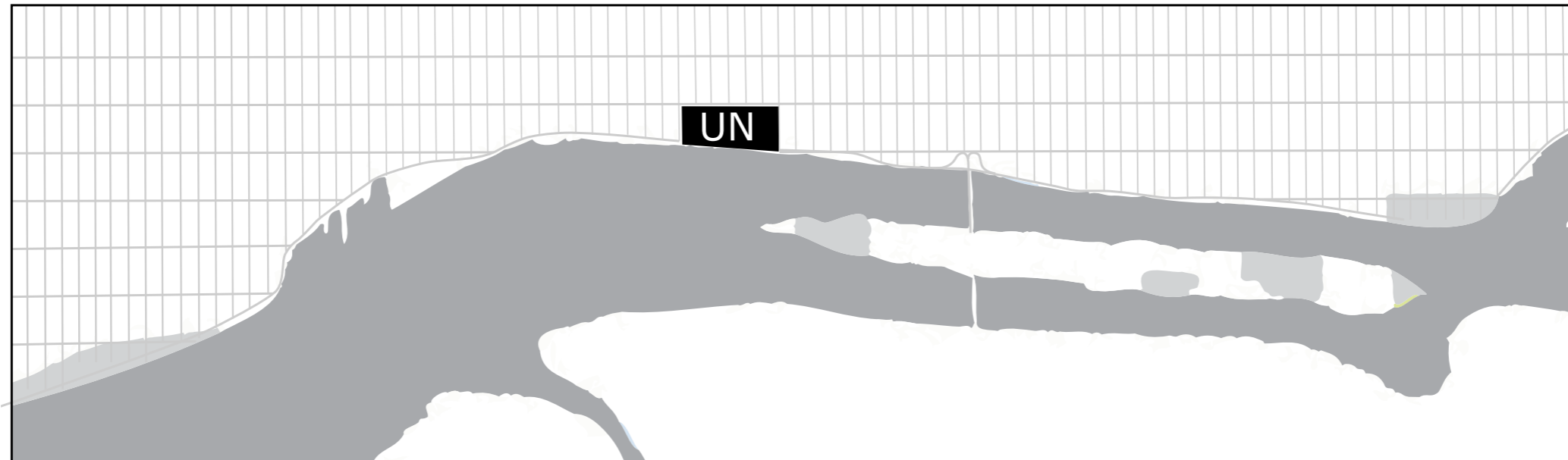
2
location



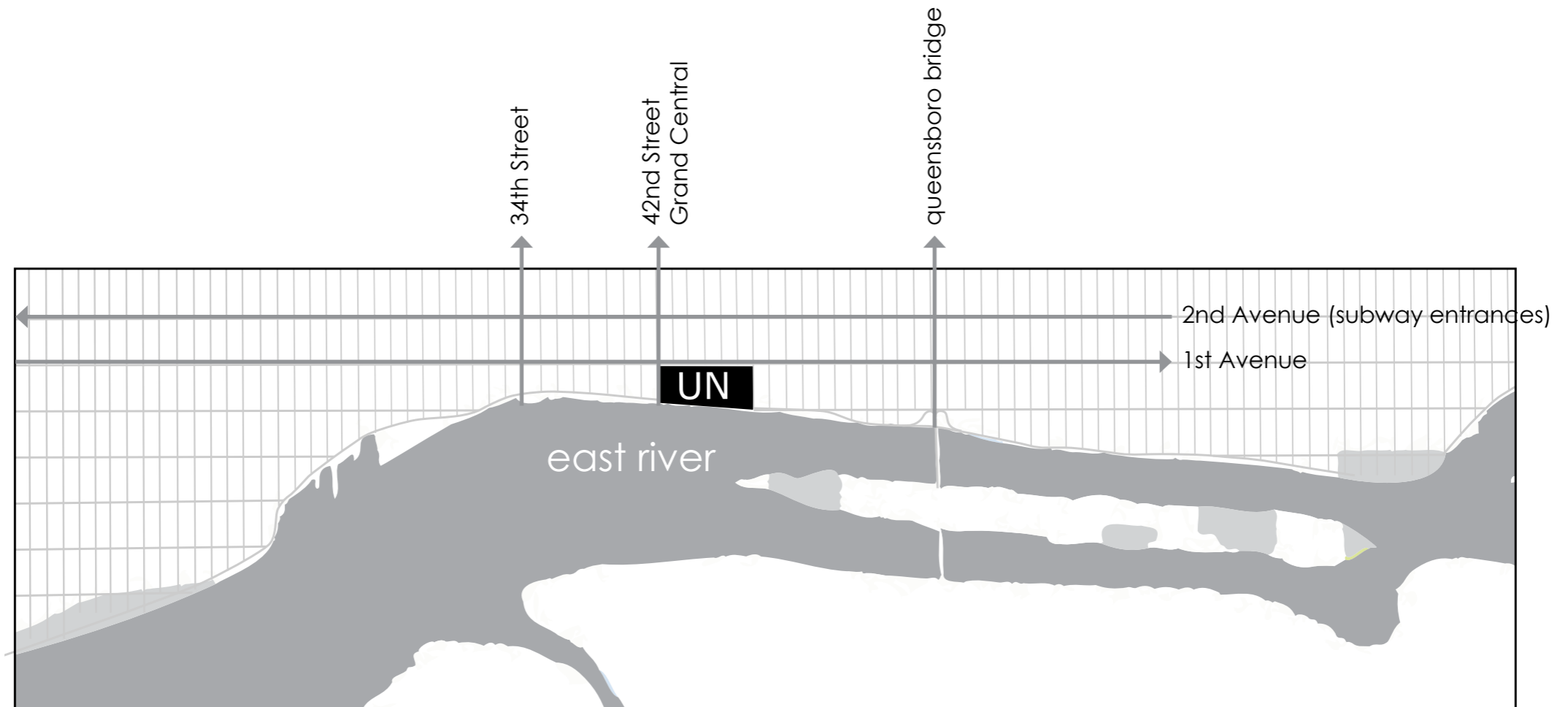
location Manhattan, New York city, USA



location Manhattan, New York city, USA



location Manhattan, New York
city, USA



location Manhattan, New York
city, USA

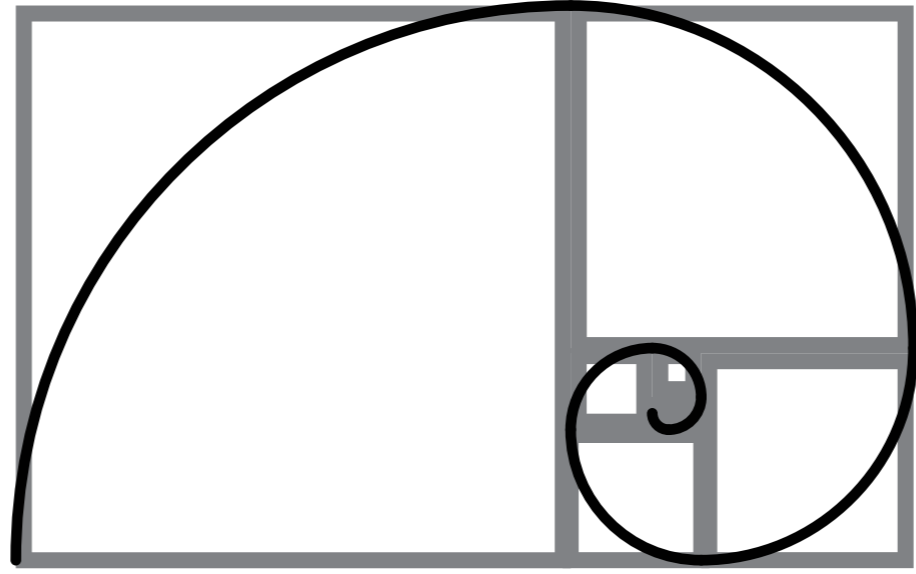


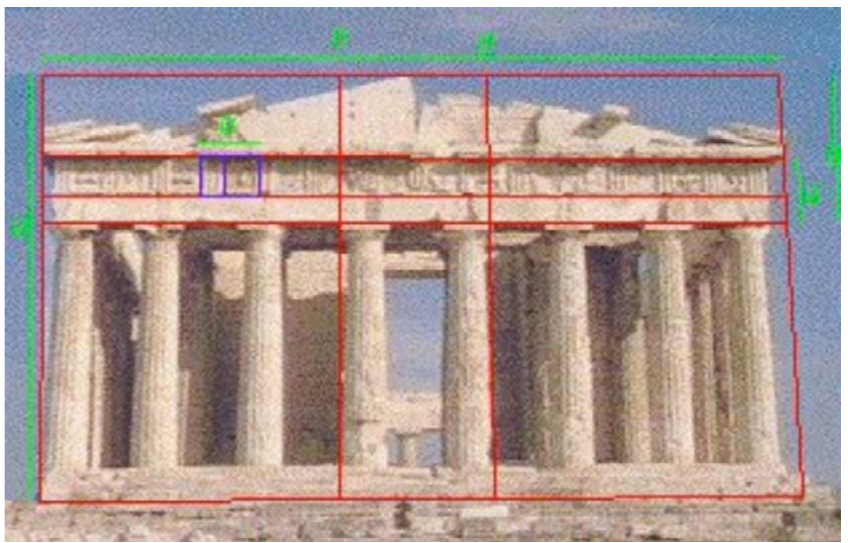
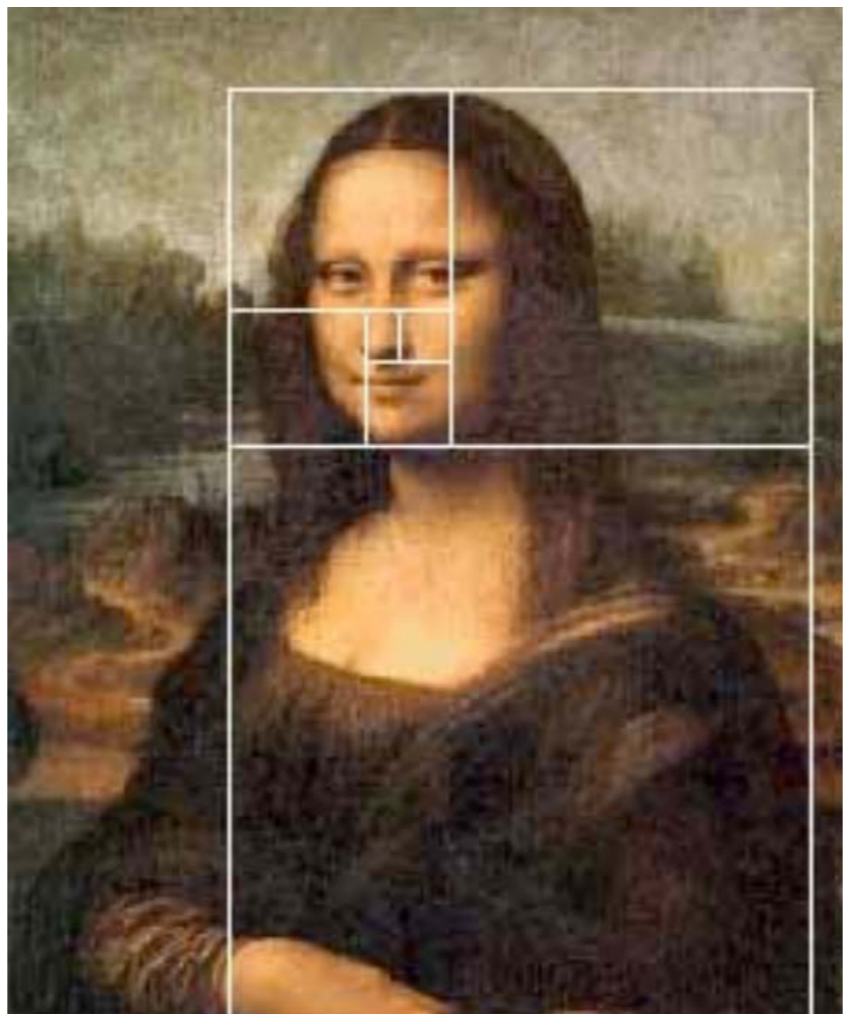
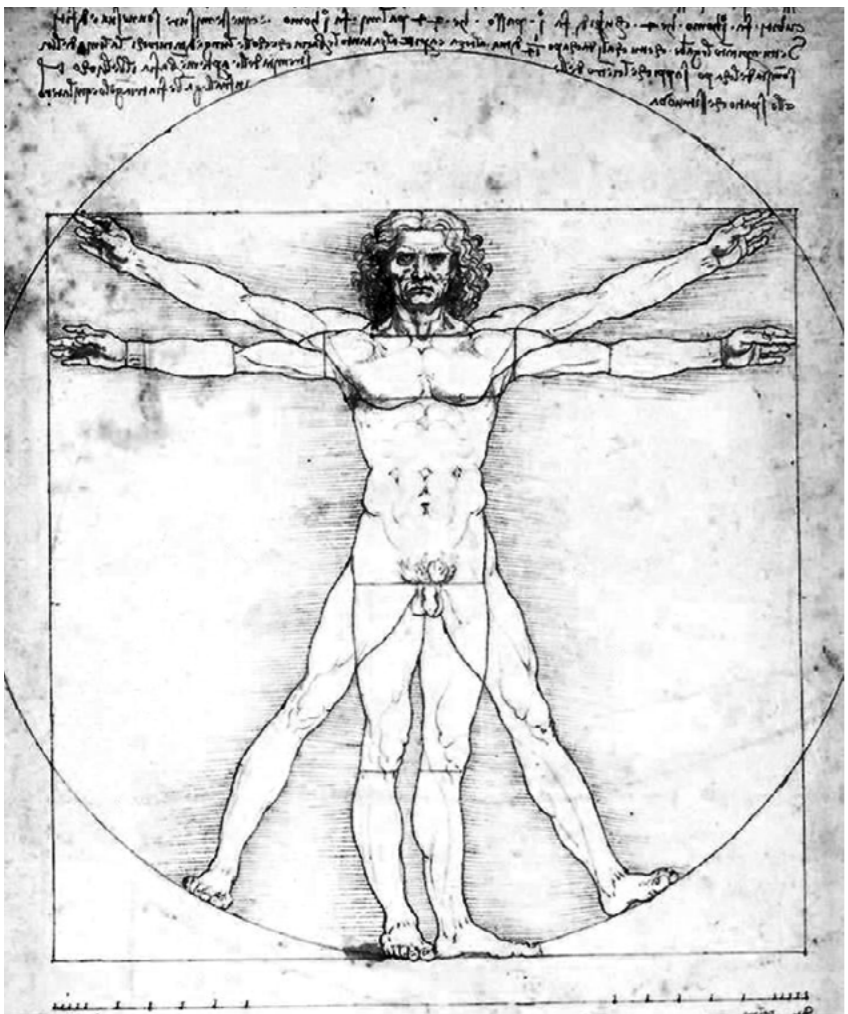
location for the UNEC



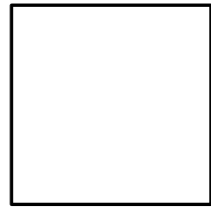


GOLDEN RULE

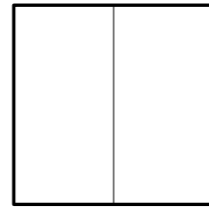




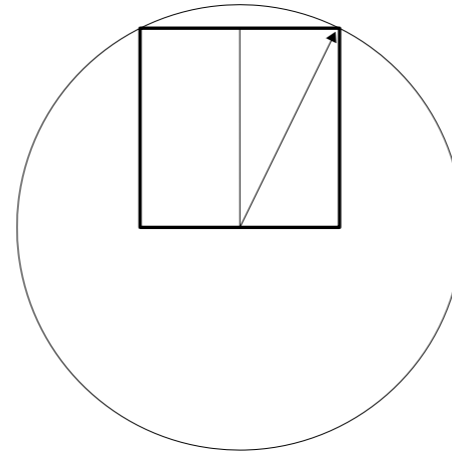
$$\phi = 1:0,618$$



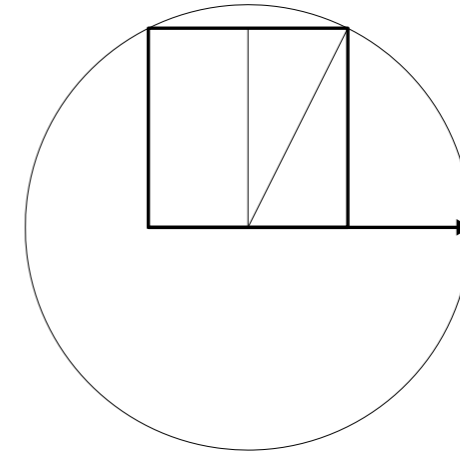
1. square



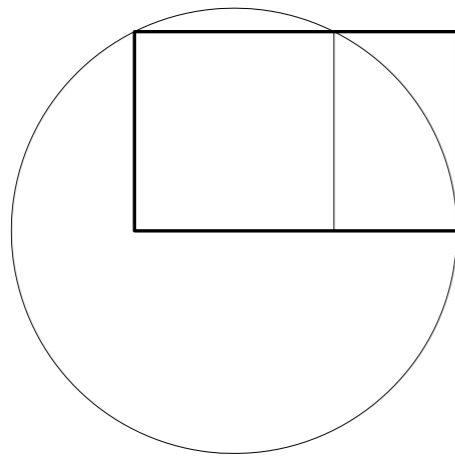
2. divide in half



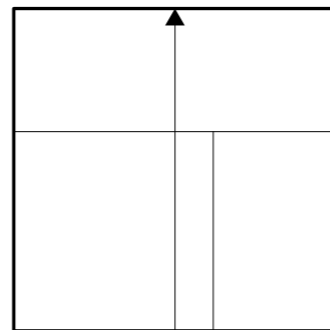
3. draw a circle from mid to far corner



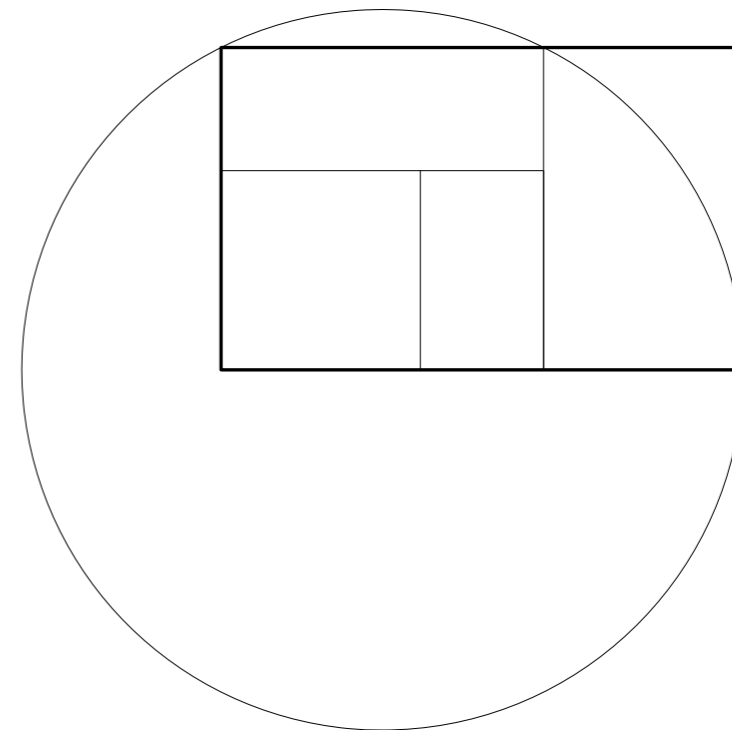
4. extend bottom line



5. make a rectangle



5. repeat





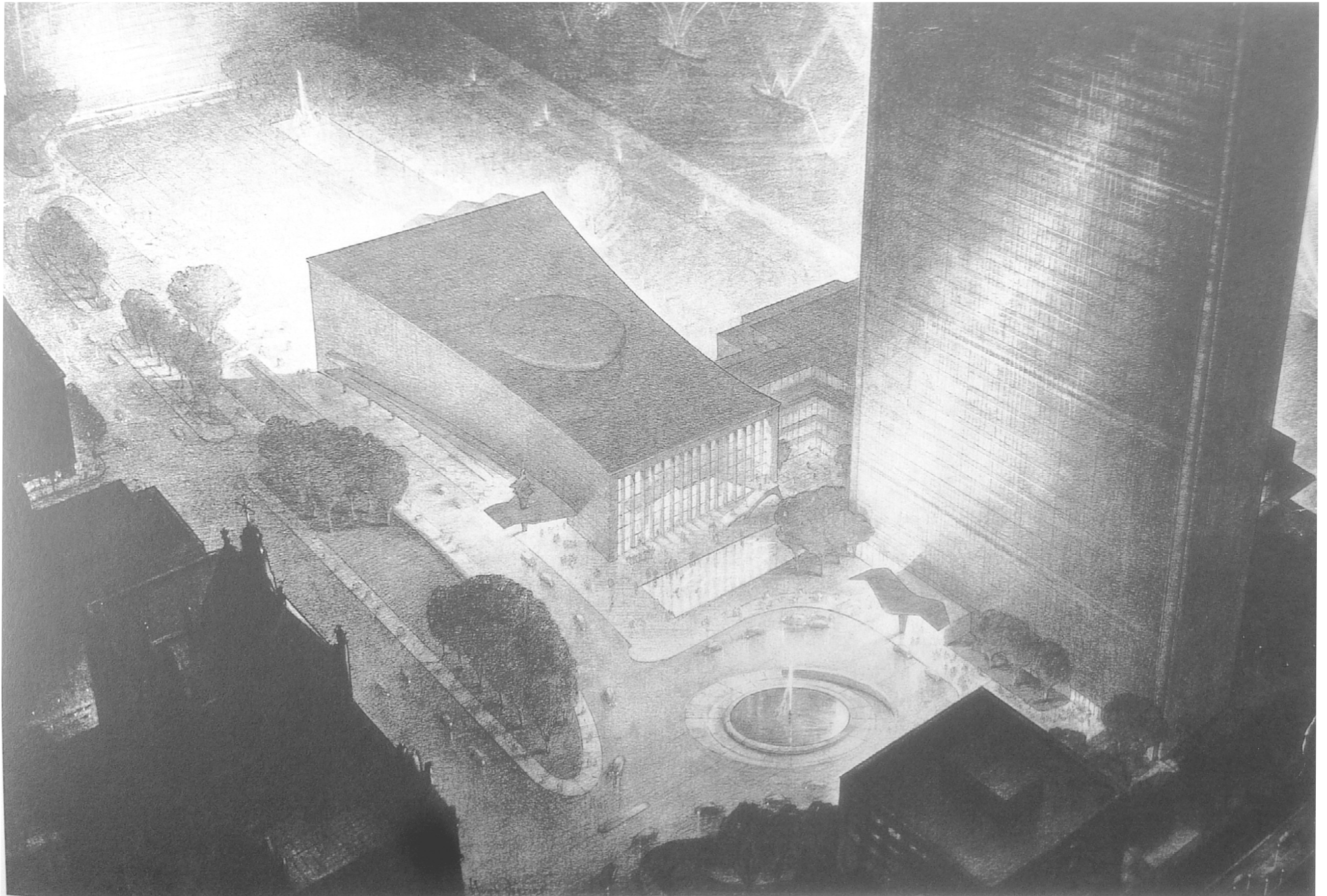


urban masterplan



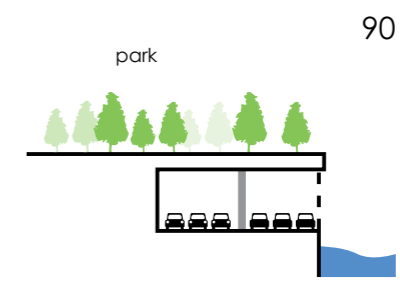
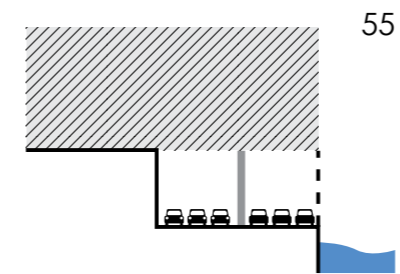
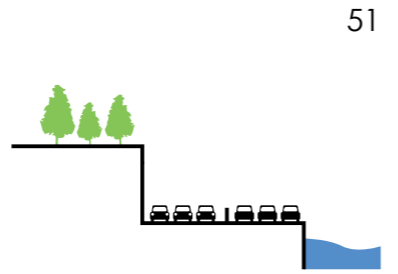
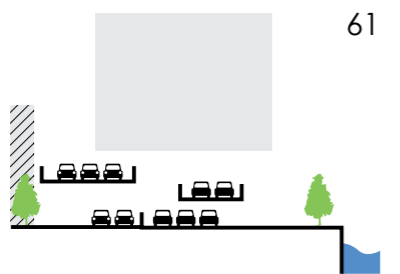
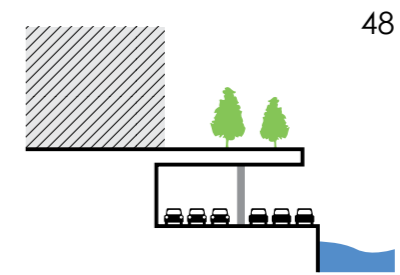
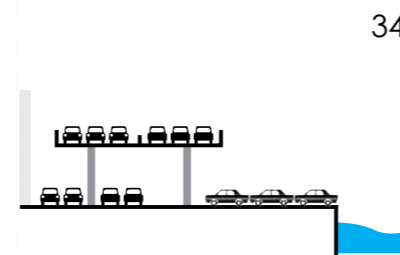
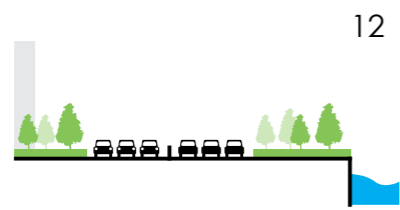
safety issue around plot

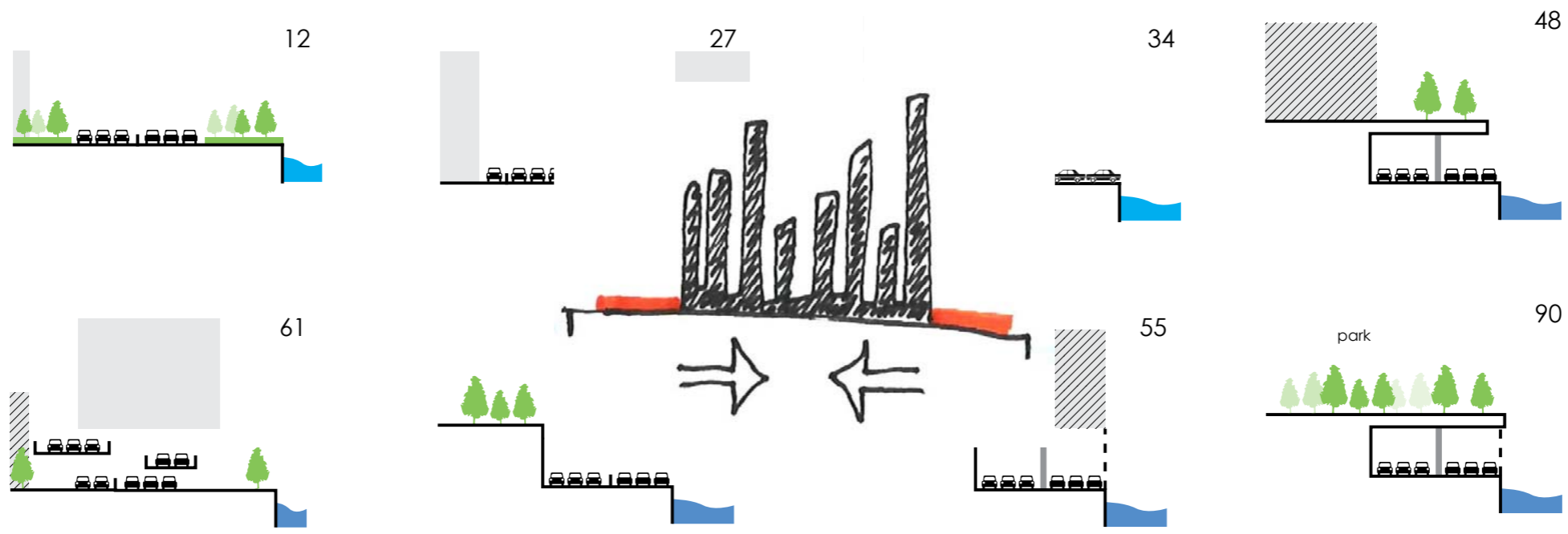




safety issue FDR drive under plot







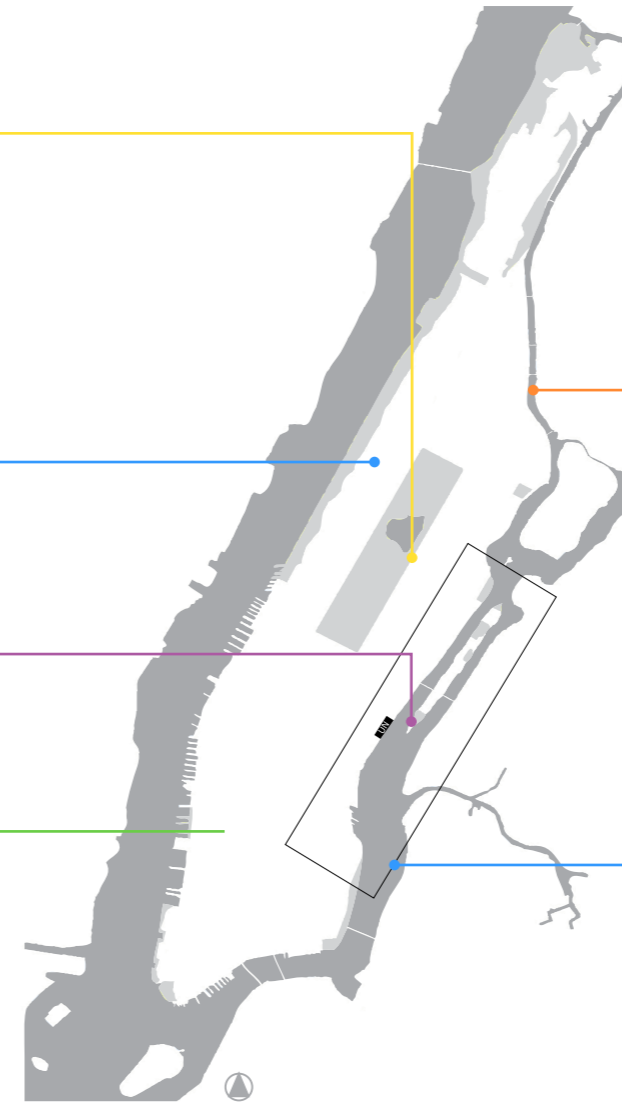


RECREATION

FACILITIES

SAFETY

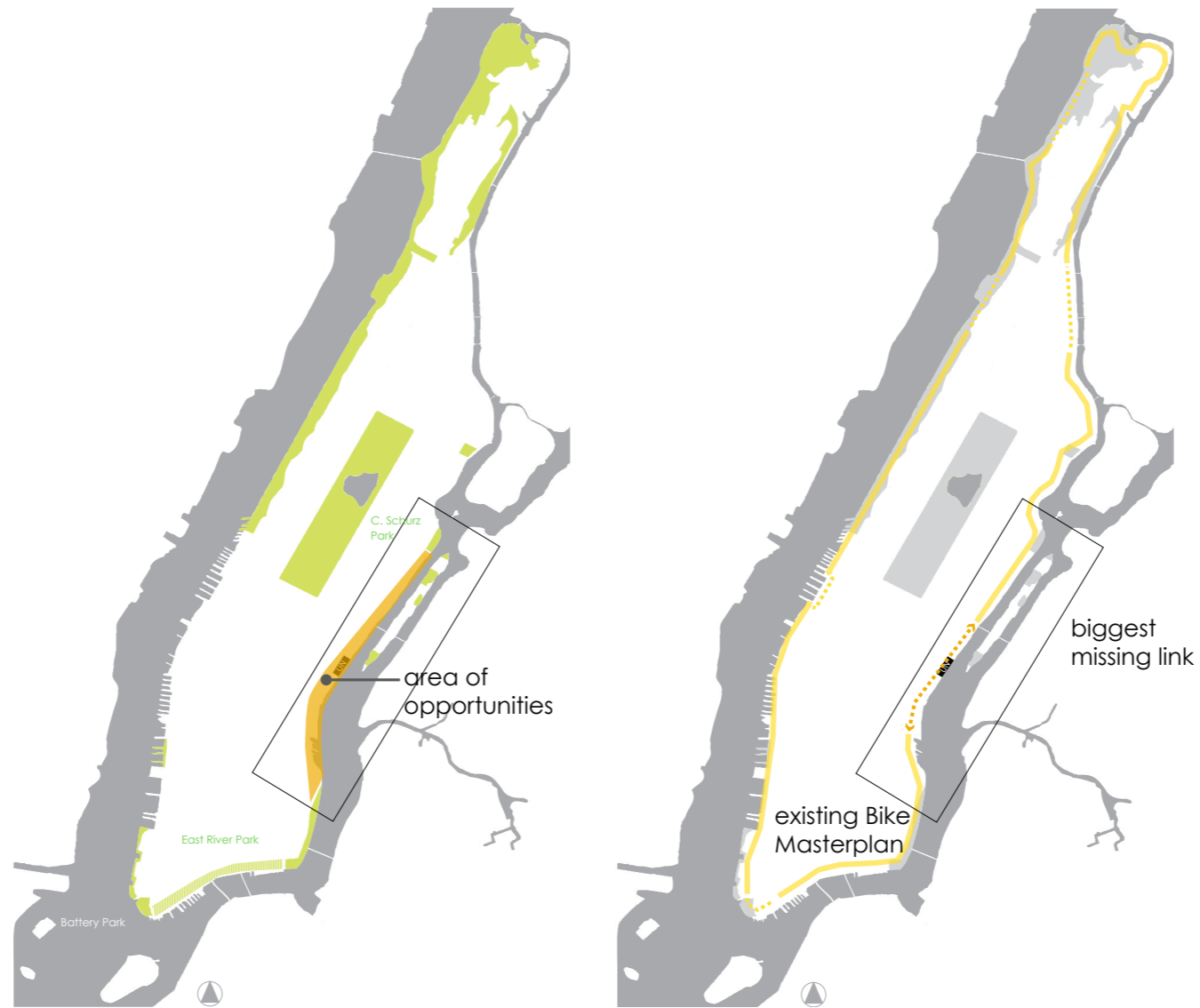
SUSTAINABILITY

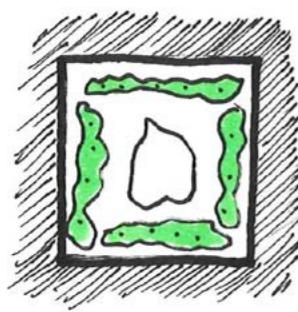


TRAFFIC

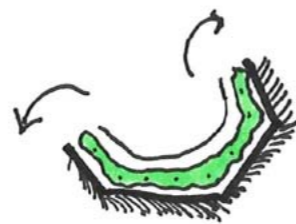
CONNECTION CITY - WATER

- park within 10 minutes travel distance
- connect the existing parks
- enable cycle routes
- use of waterbusses
- increase the amount of recreational zones

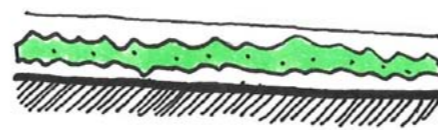




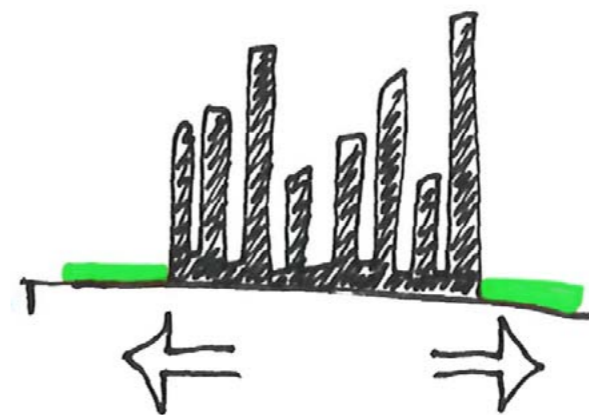
CENTRAL PARK

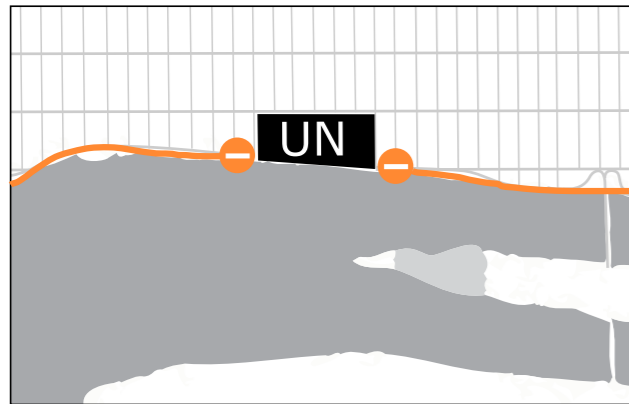


UNFOLD

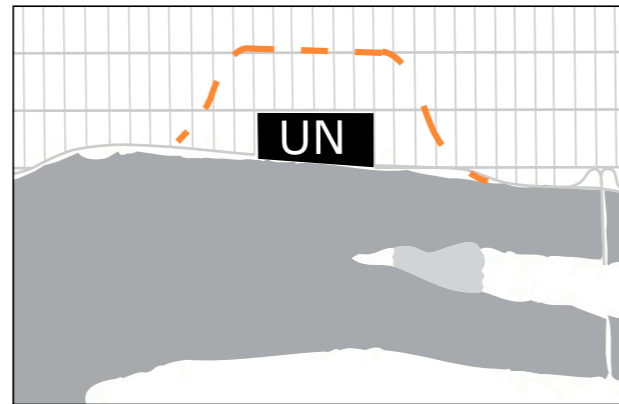


'DUTCH PARK'
EAST RIVER

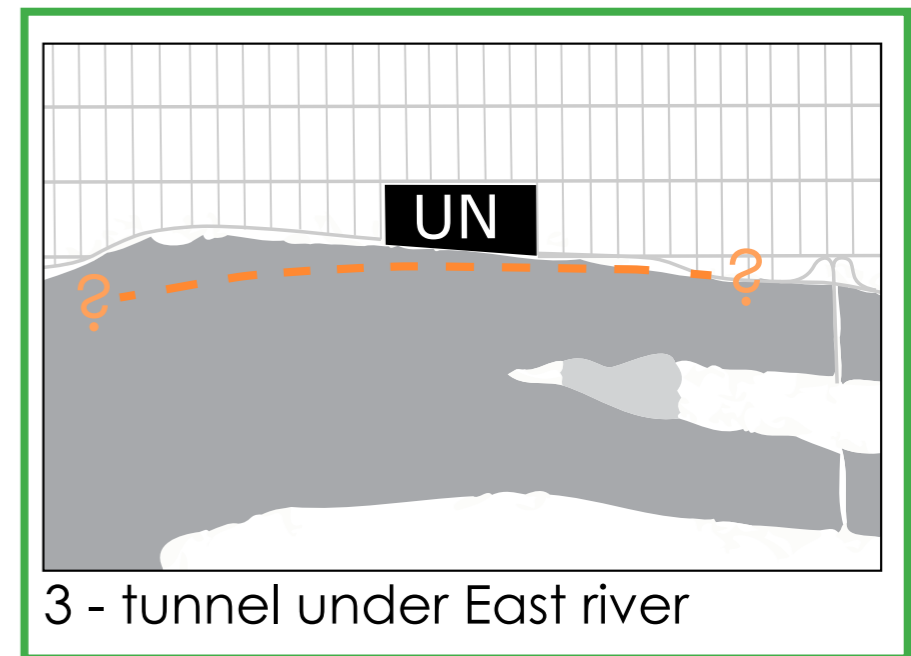




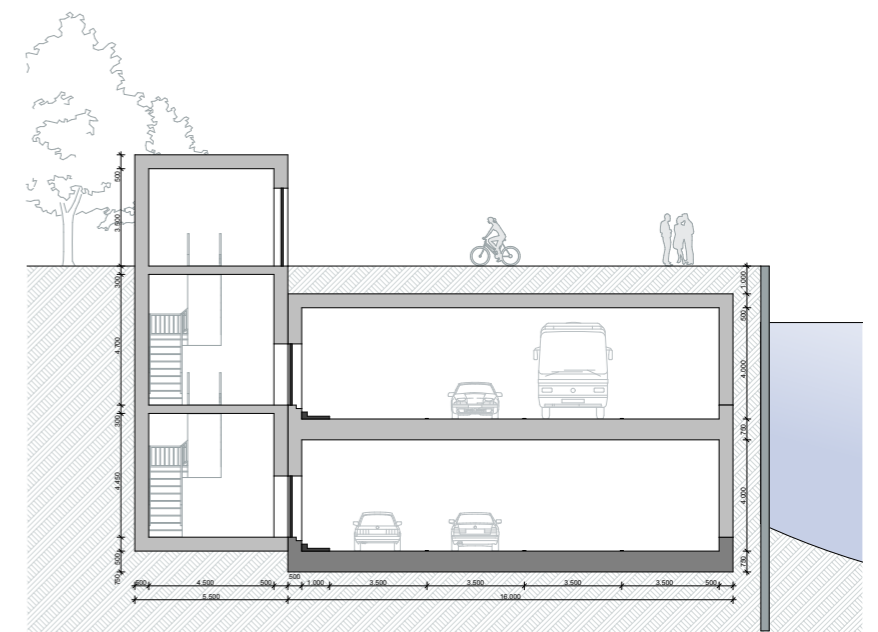
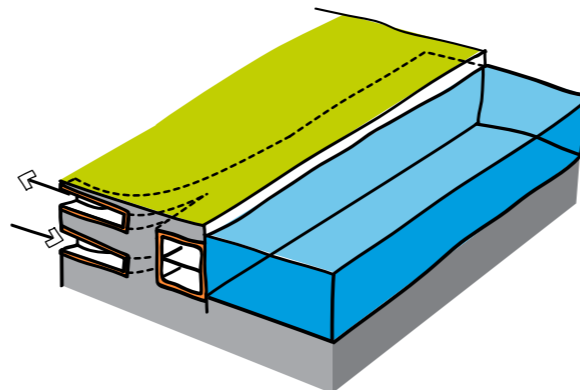
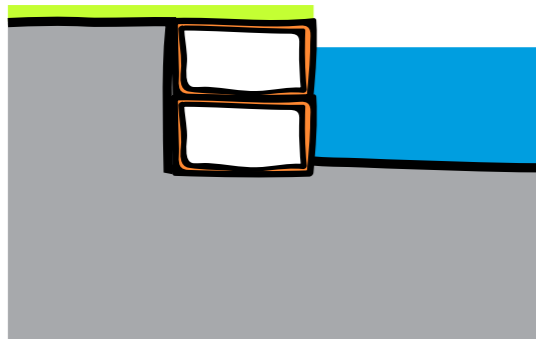
1 - delete FDR drive



2 - tunnel under 2nd Avenue

















3 - tunnel under East river

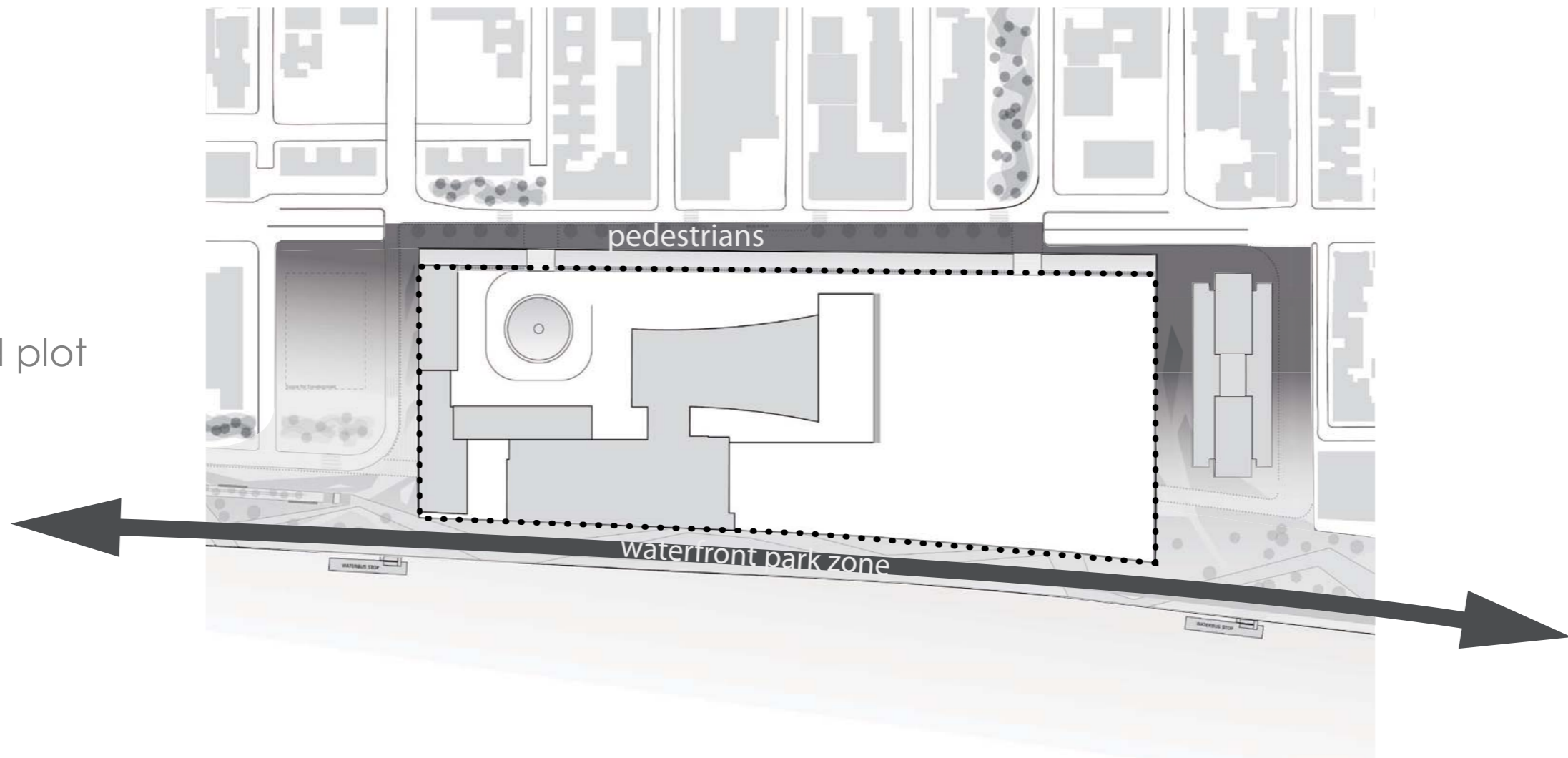


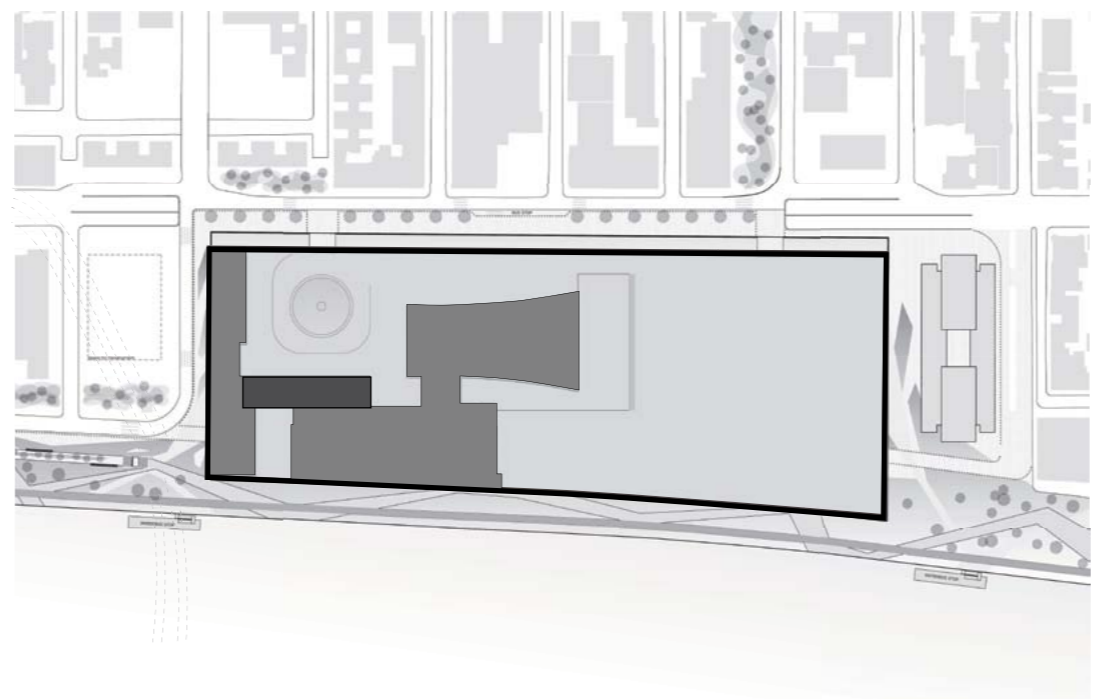
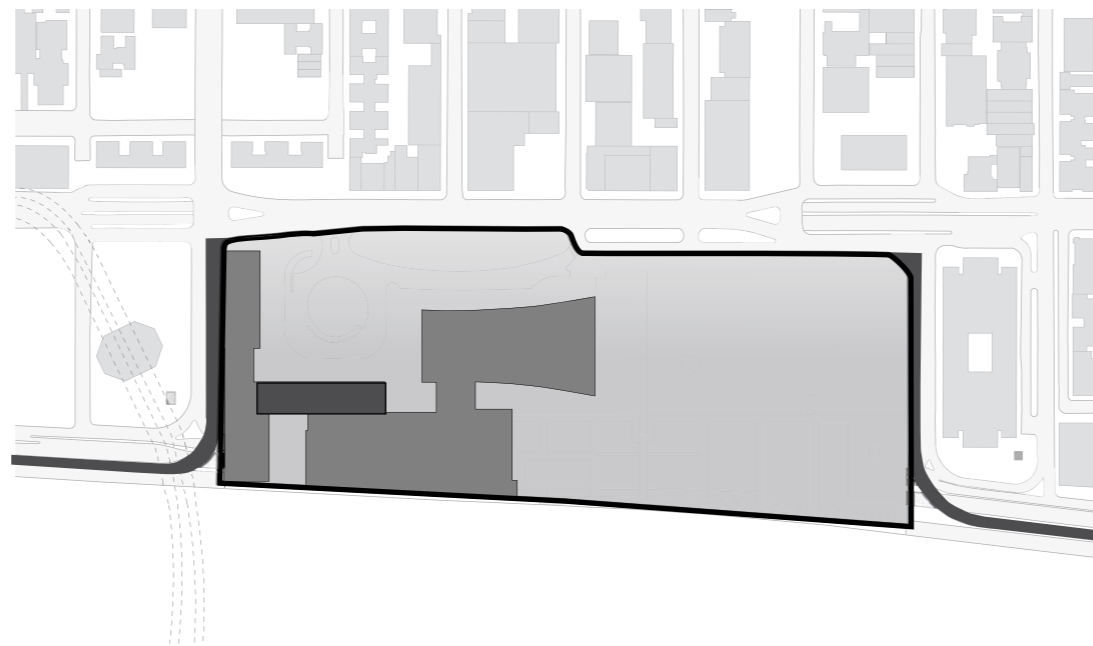


LEGEND

	cars		waterbus		fitness		culture
	subway		waterbus (fast)		hotel and catering facilities		canoeing
	bicycle lanes		city green / park		possible developments		segway tours
	walkways						cafes and bars

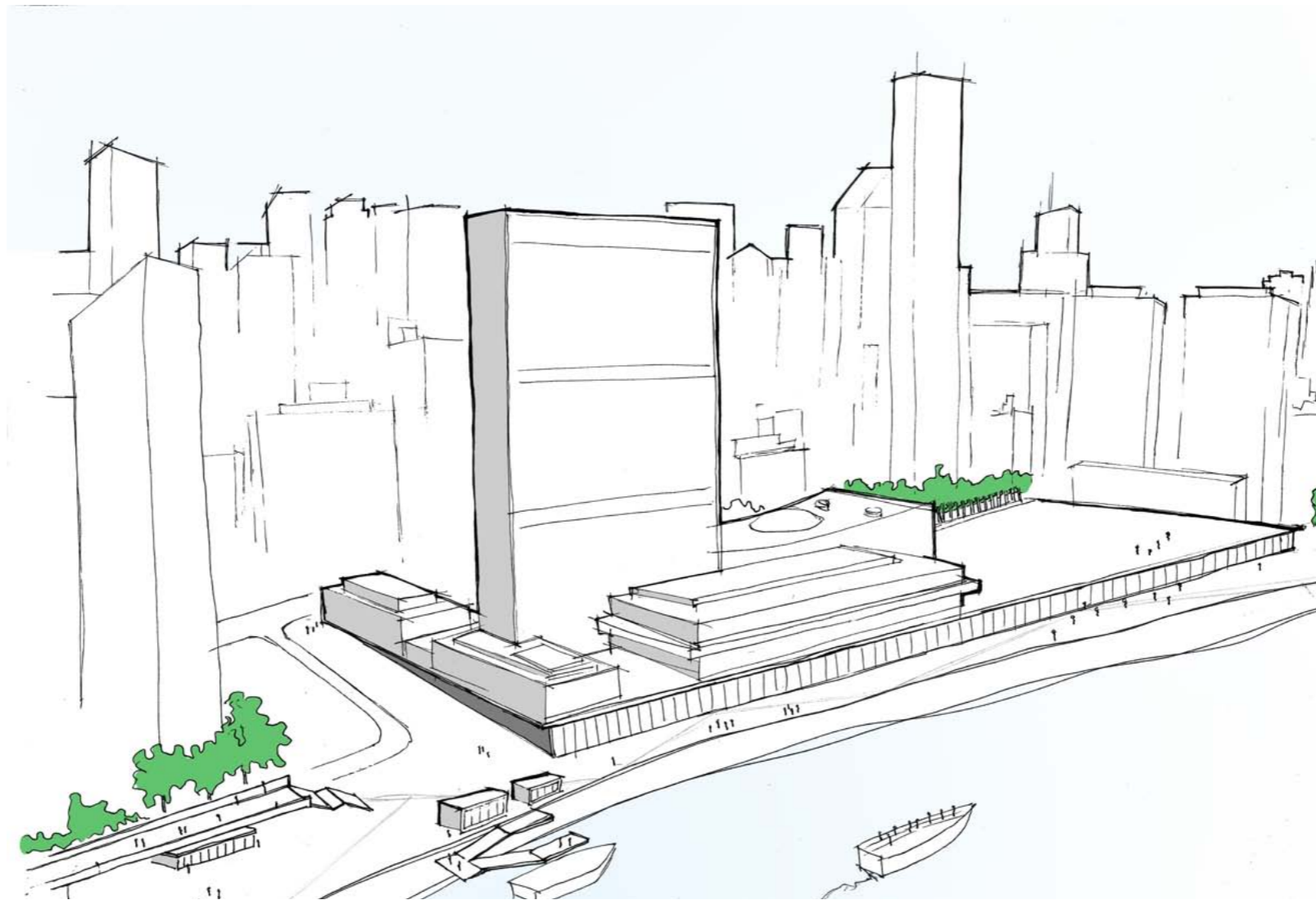
2-sided plot



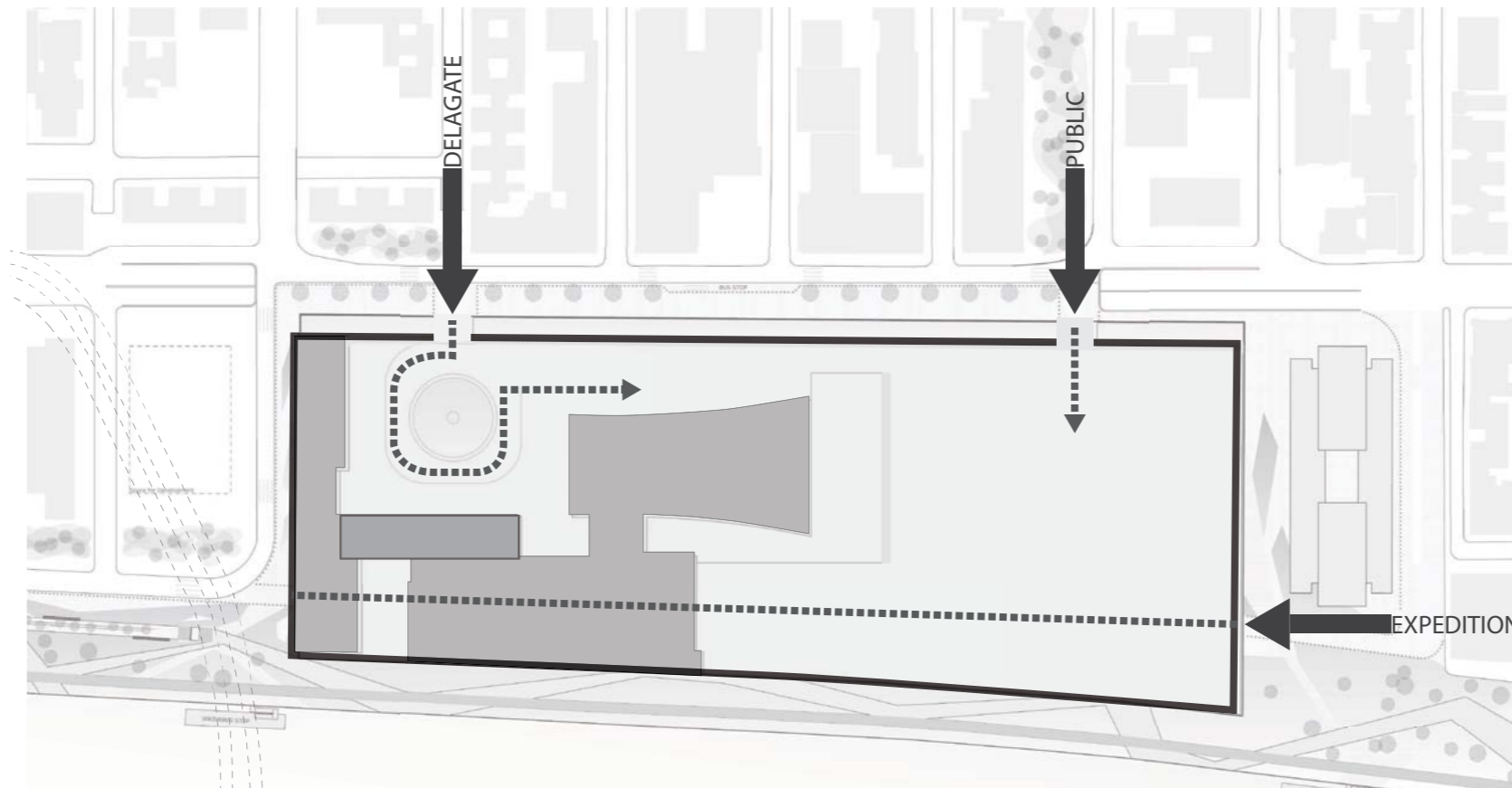


creating a podium
for the UNHQ

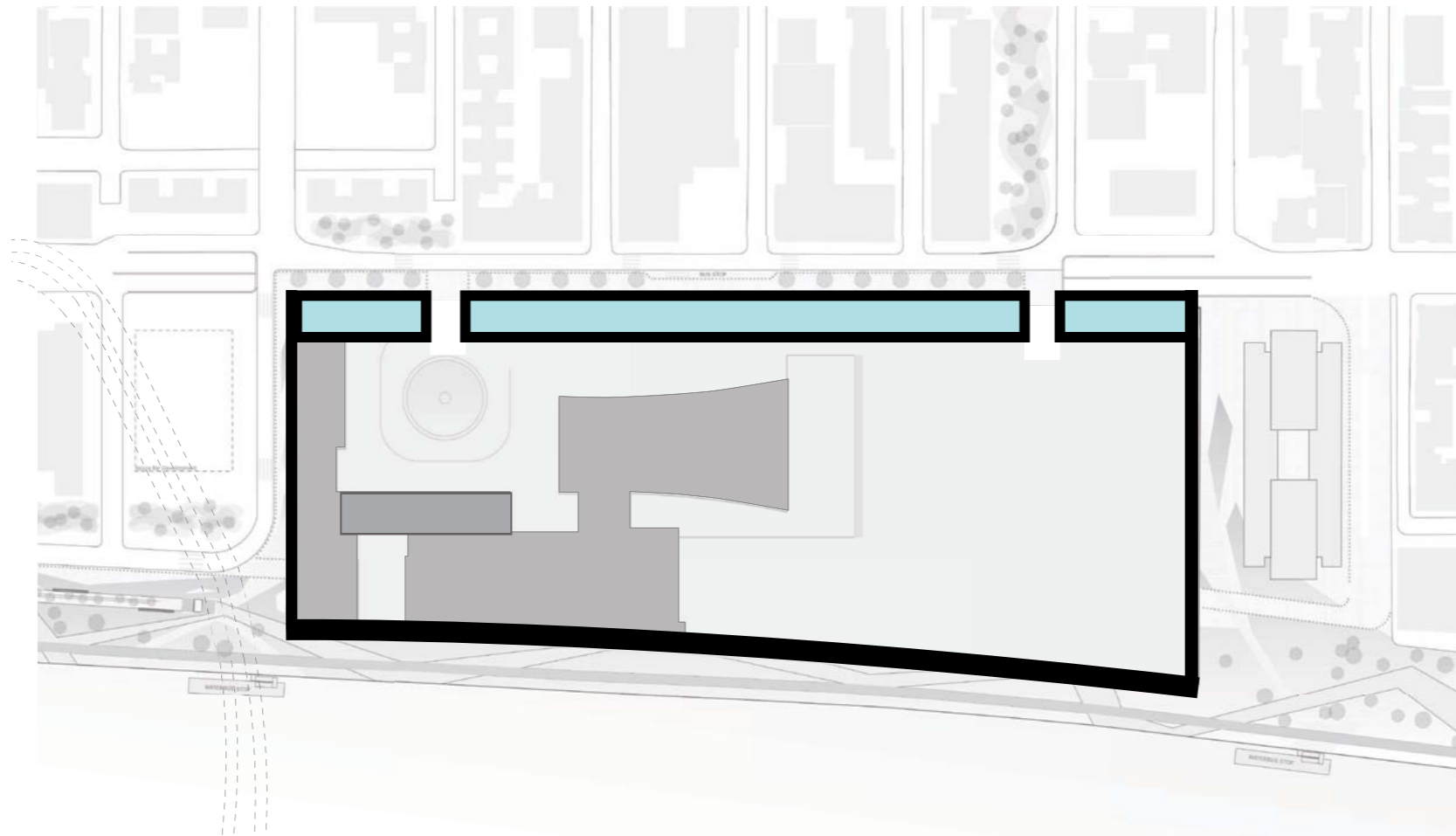
view from East
River



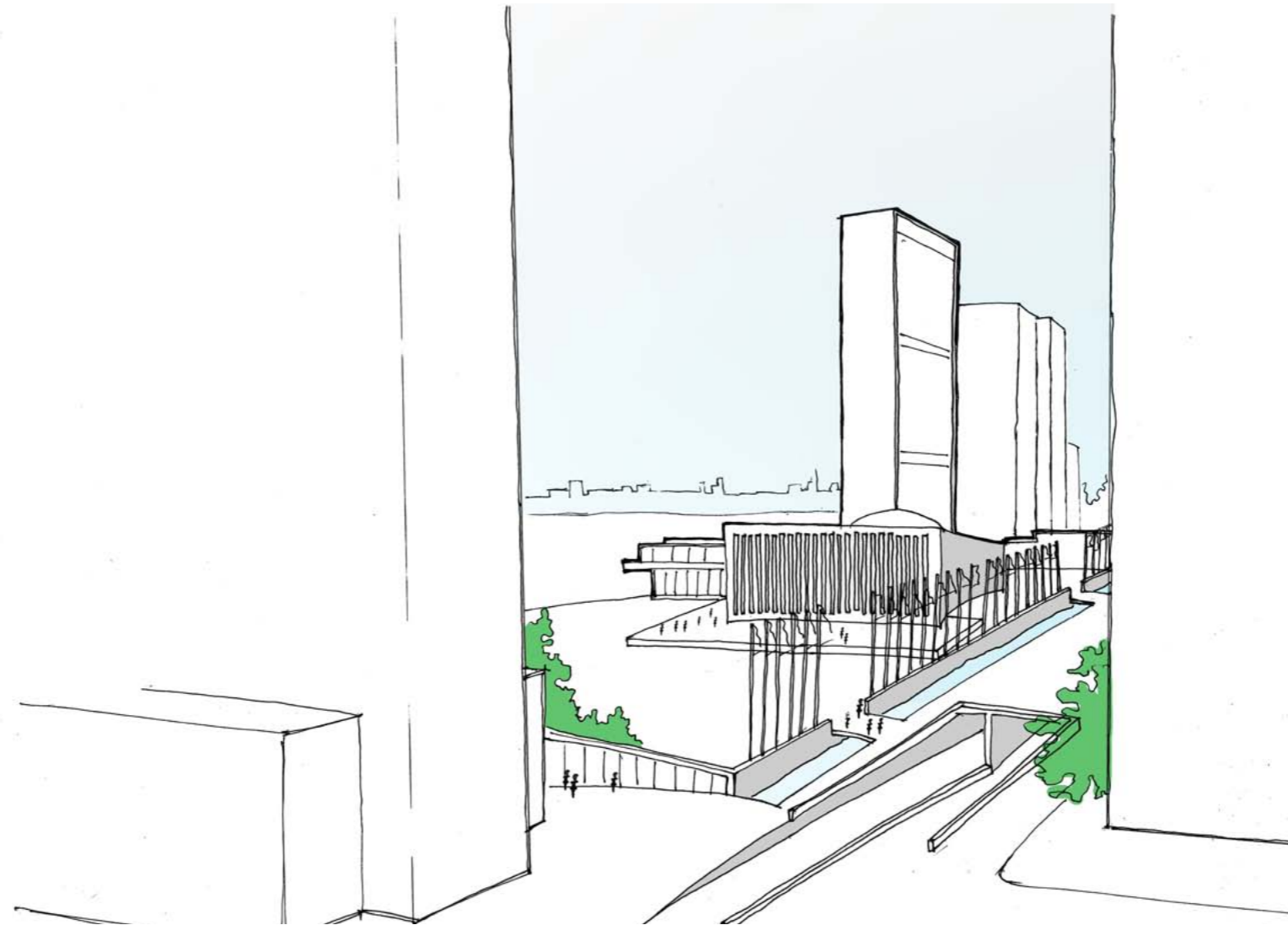
reduce current
traffic flows



creating safety
buffers around
building



view from 1st
ave.

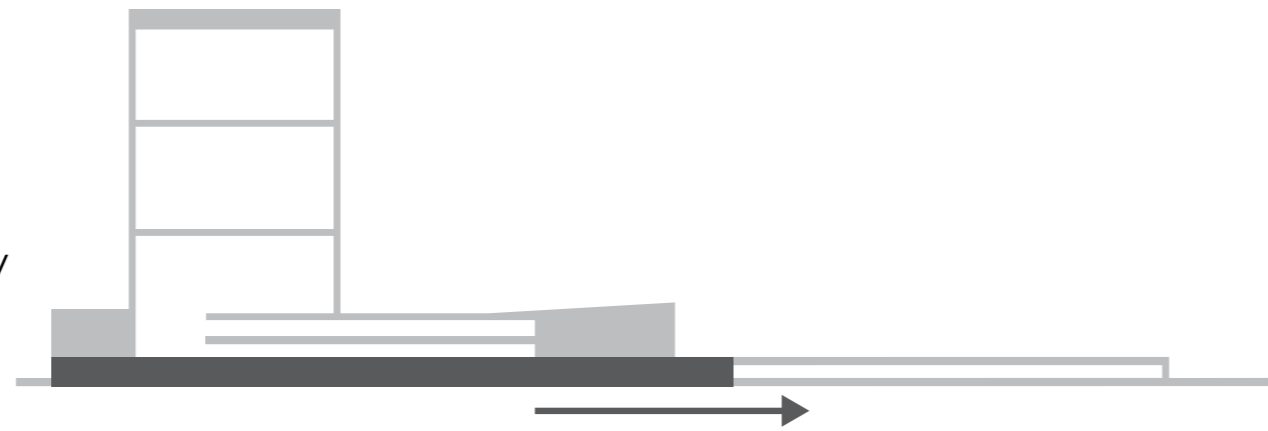


design
concept

current situation: scheme #42



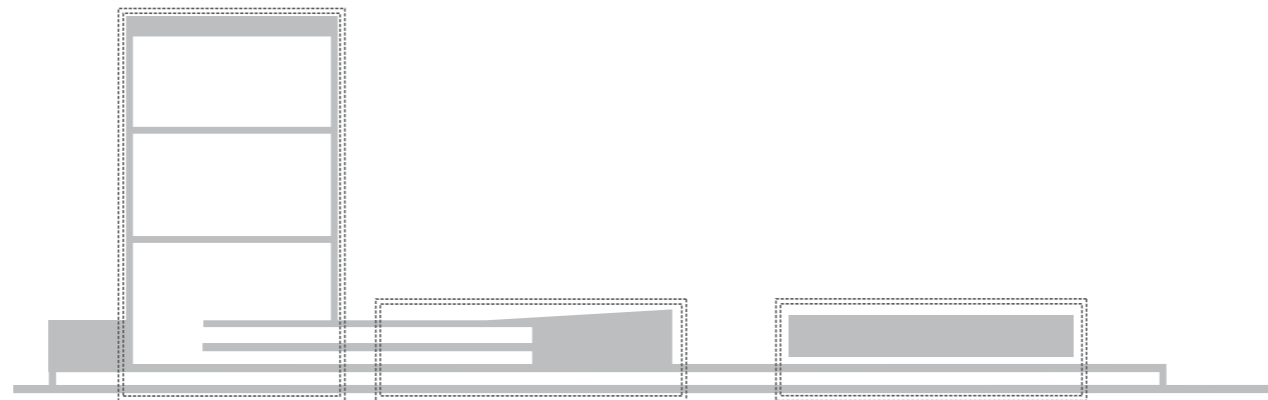
extending current functionality



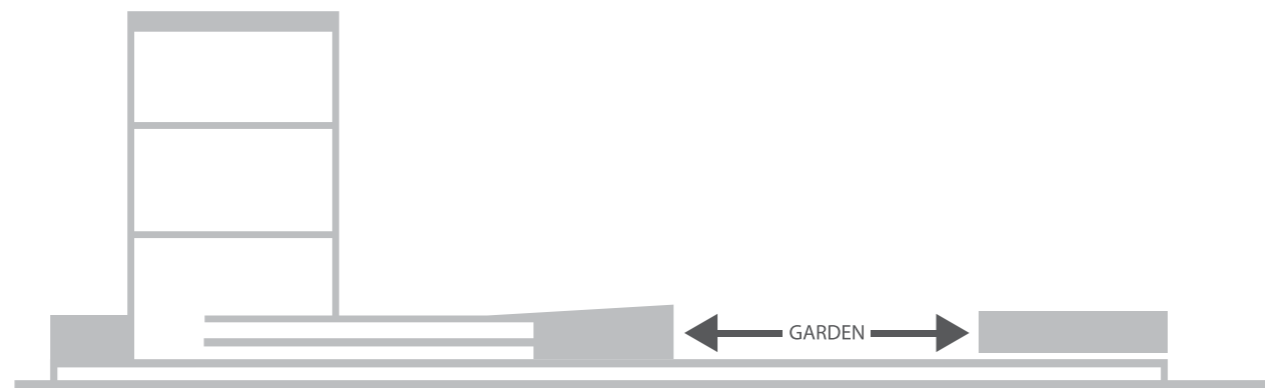
adding UNEC volume



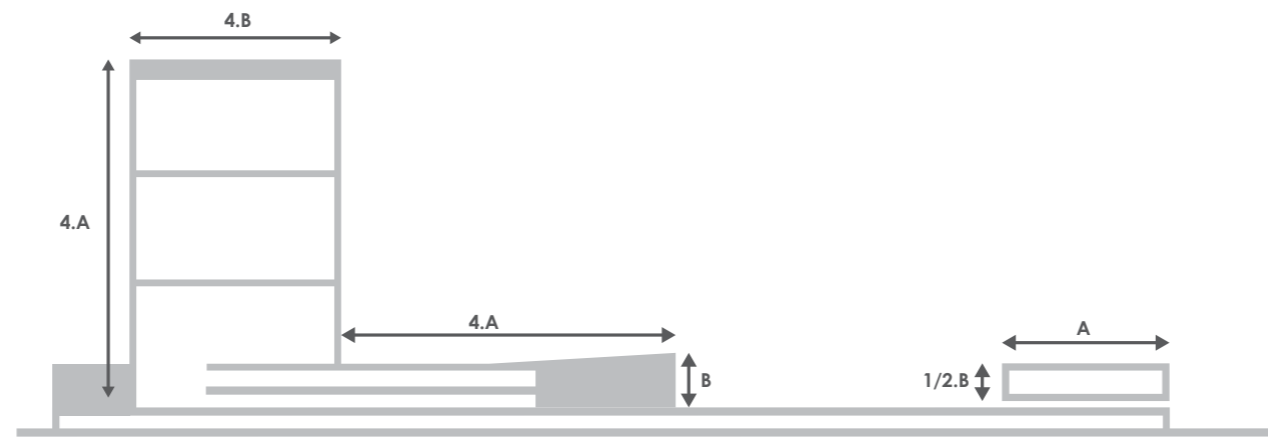
adapt to current characteristics



maximise use of garden



use of current measurements



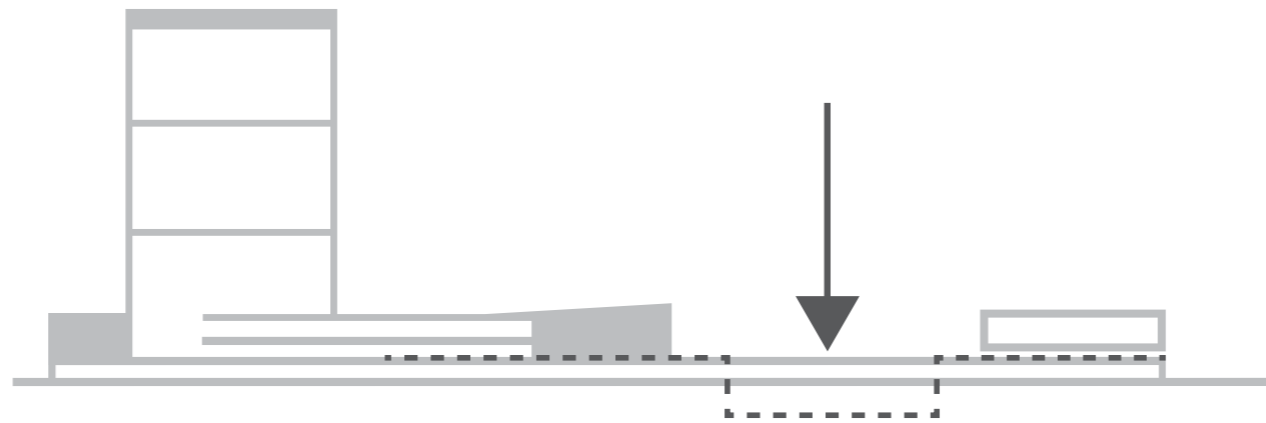
creating a sustainable UNHQ



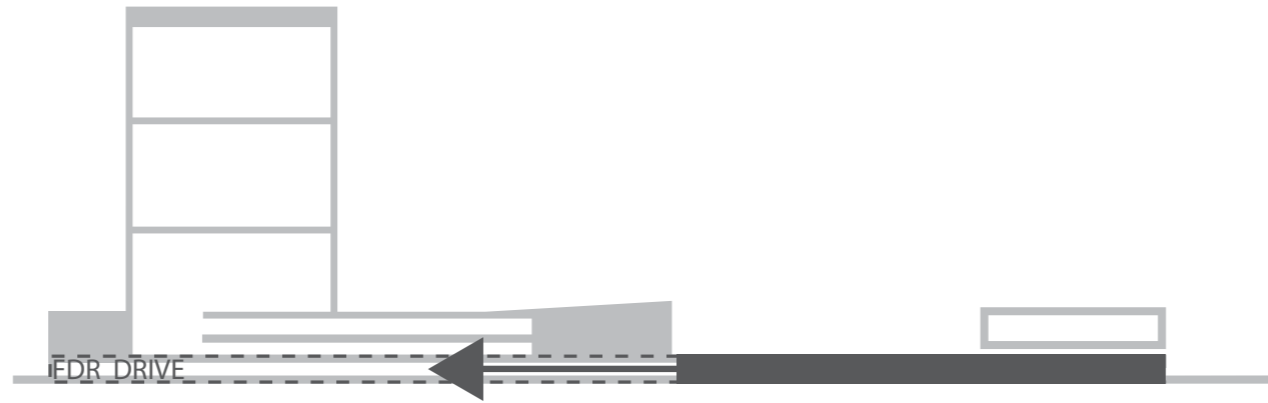
architecturally integrate
sustainability

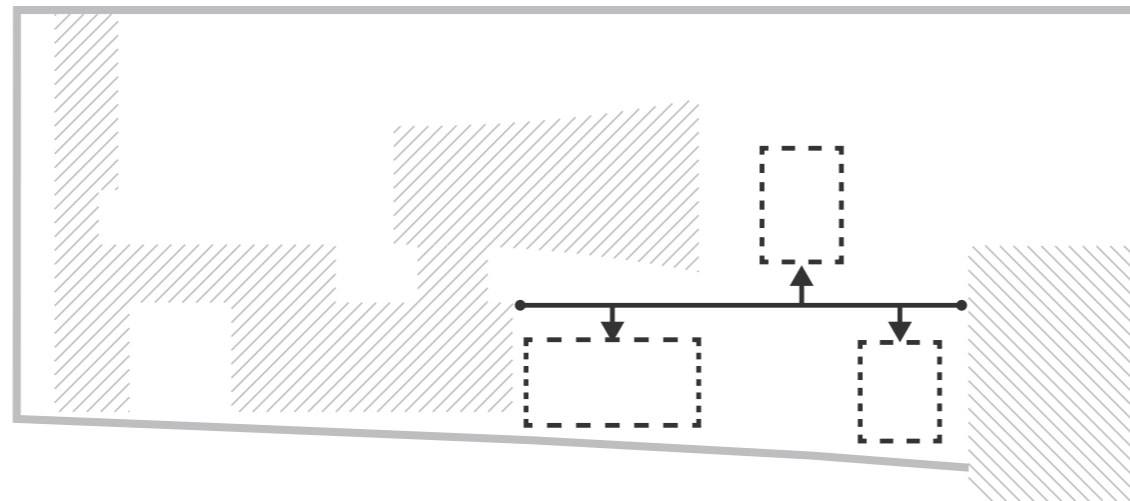


use of earth coupling

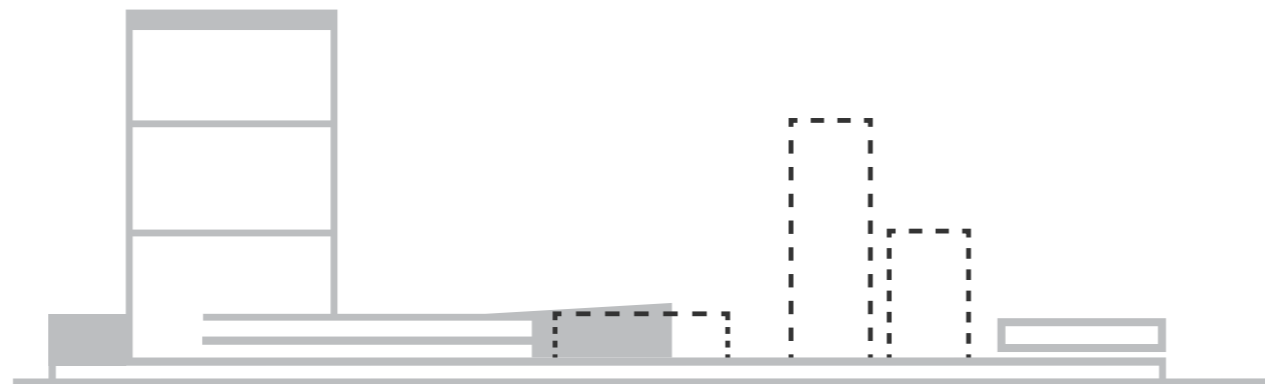


use of FDR drive





creating a structure for possible extensions

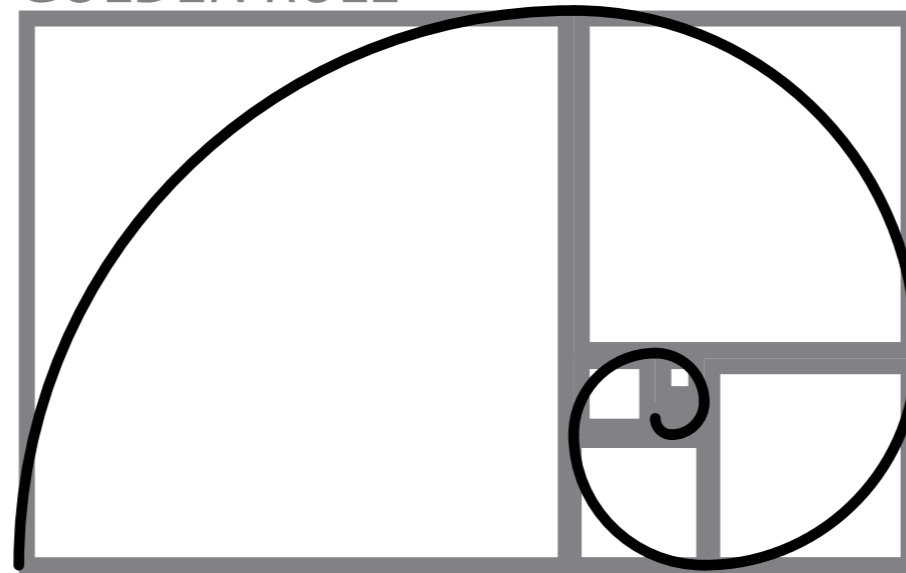


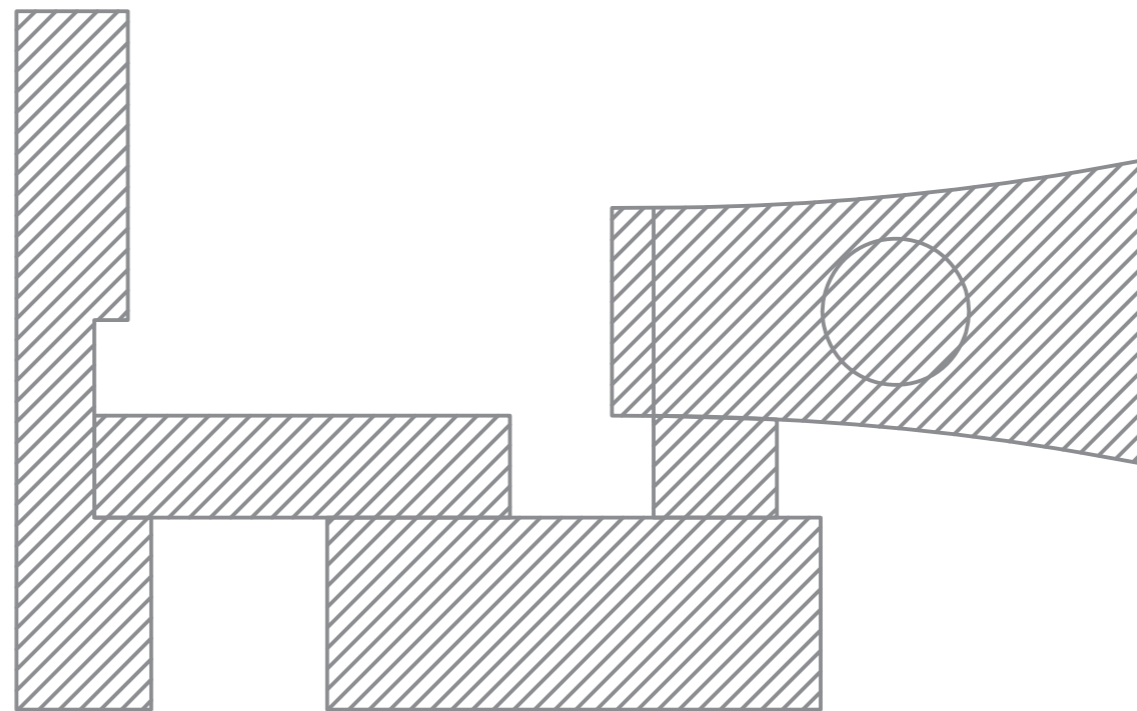
design basis scheme #43

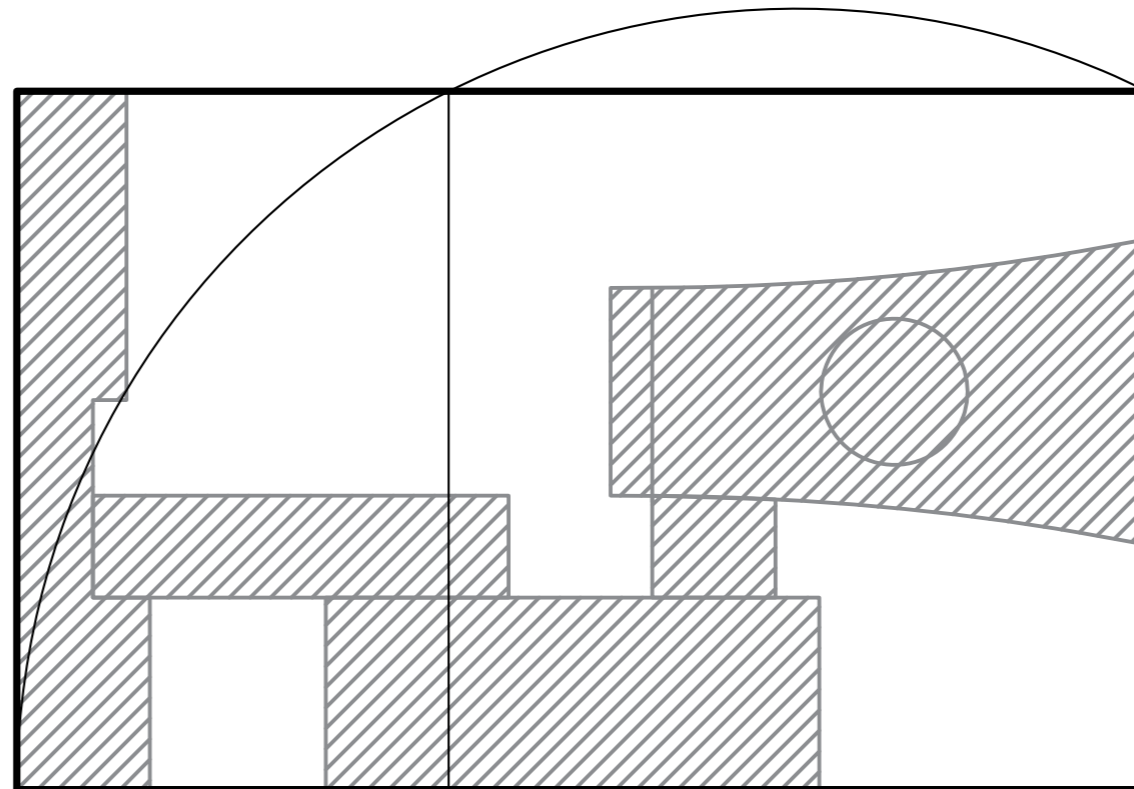


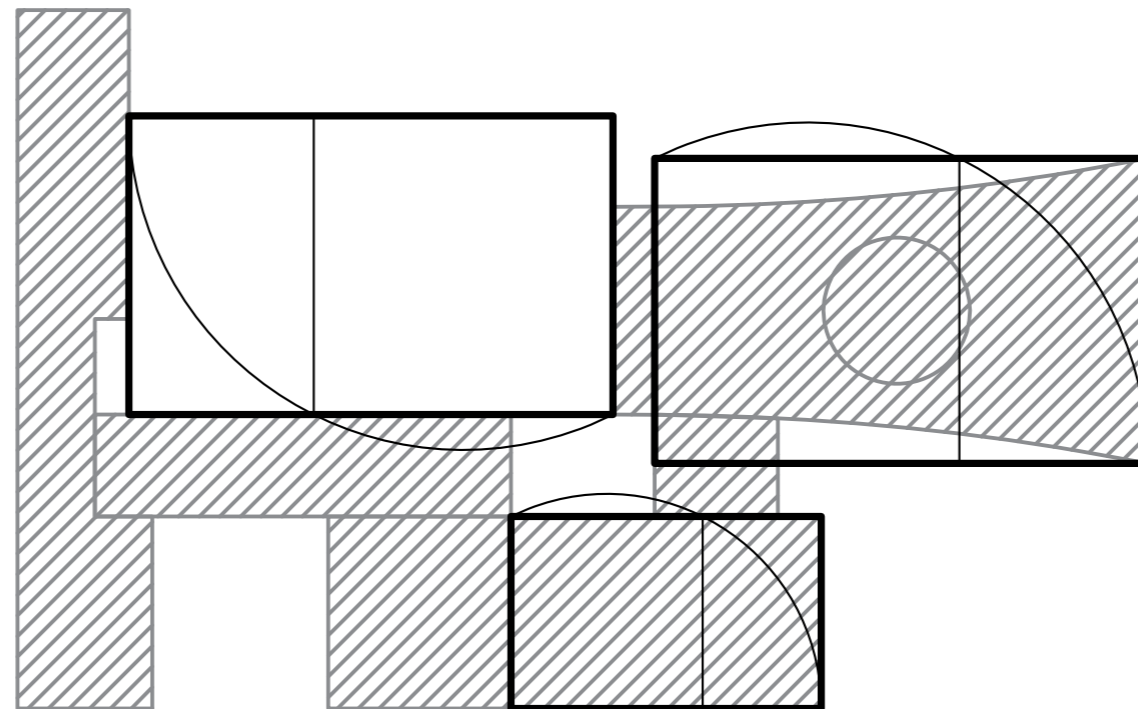
keep current measurements

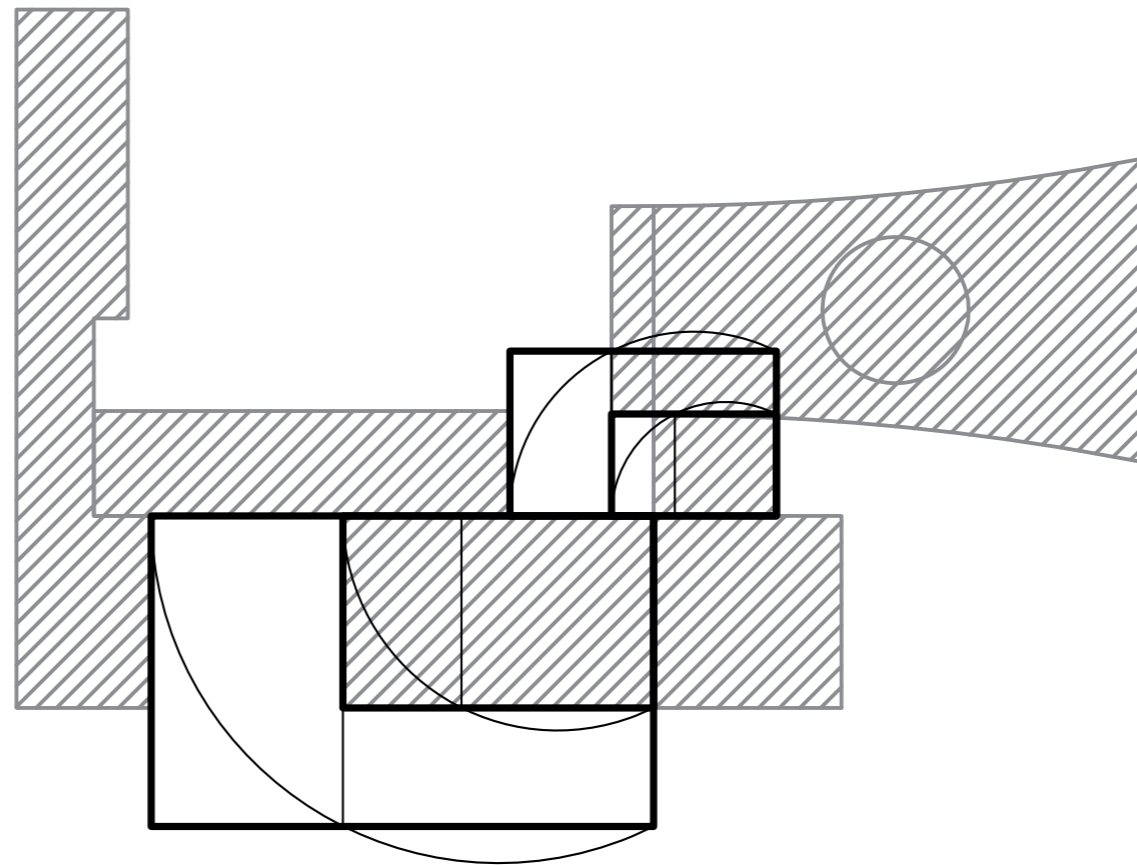
GOLDEN RULE

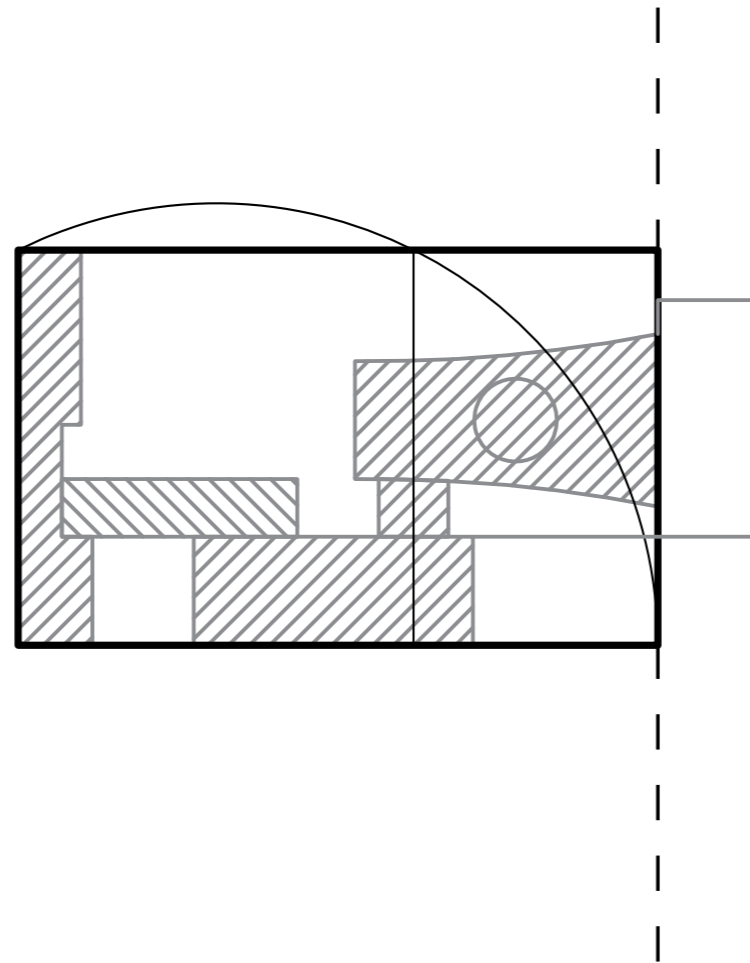


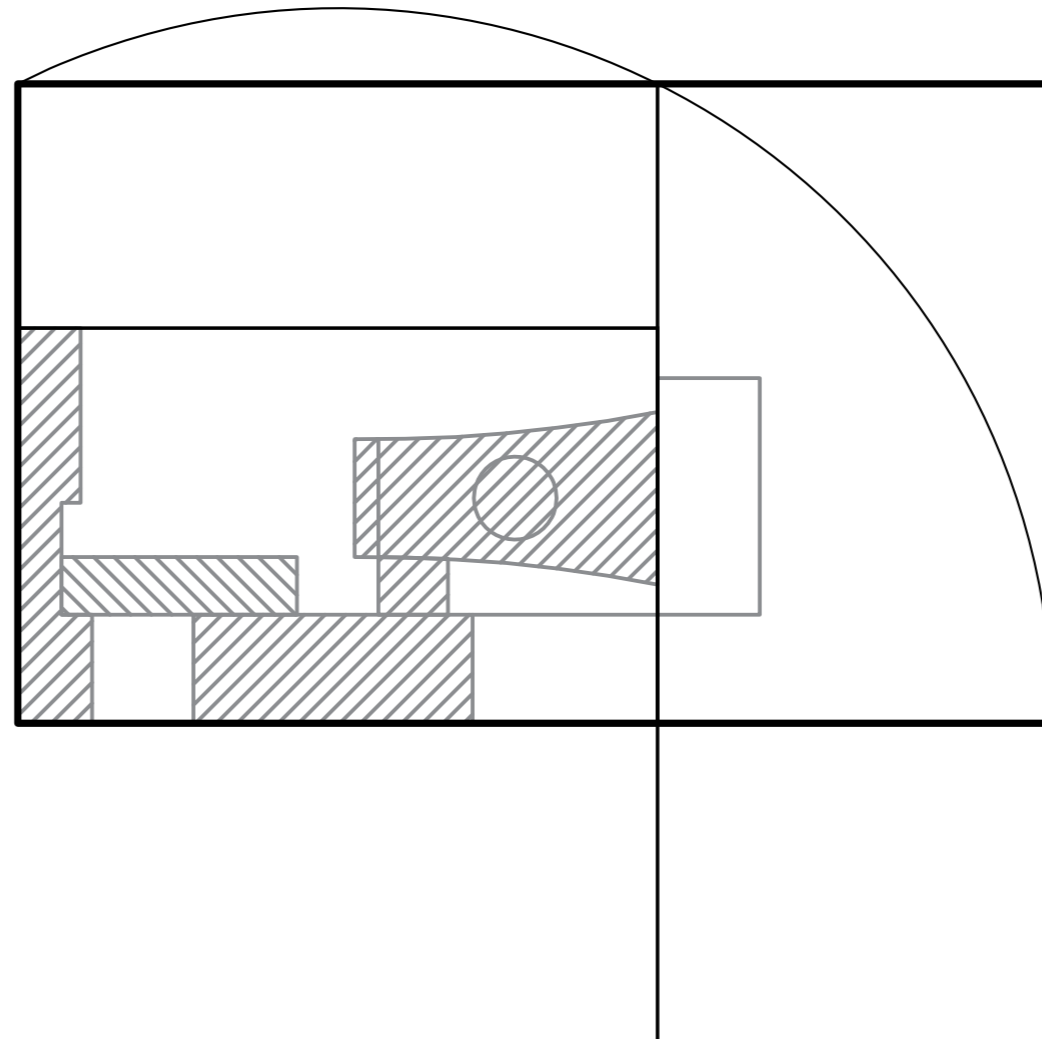


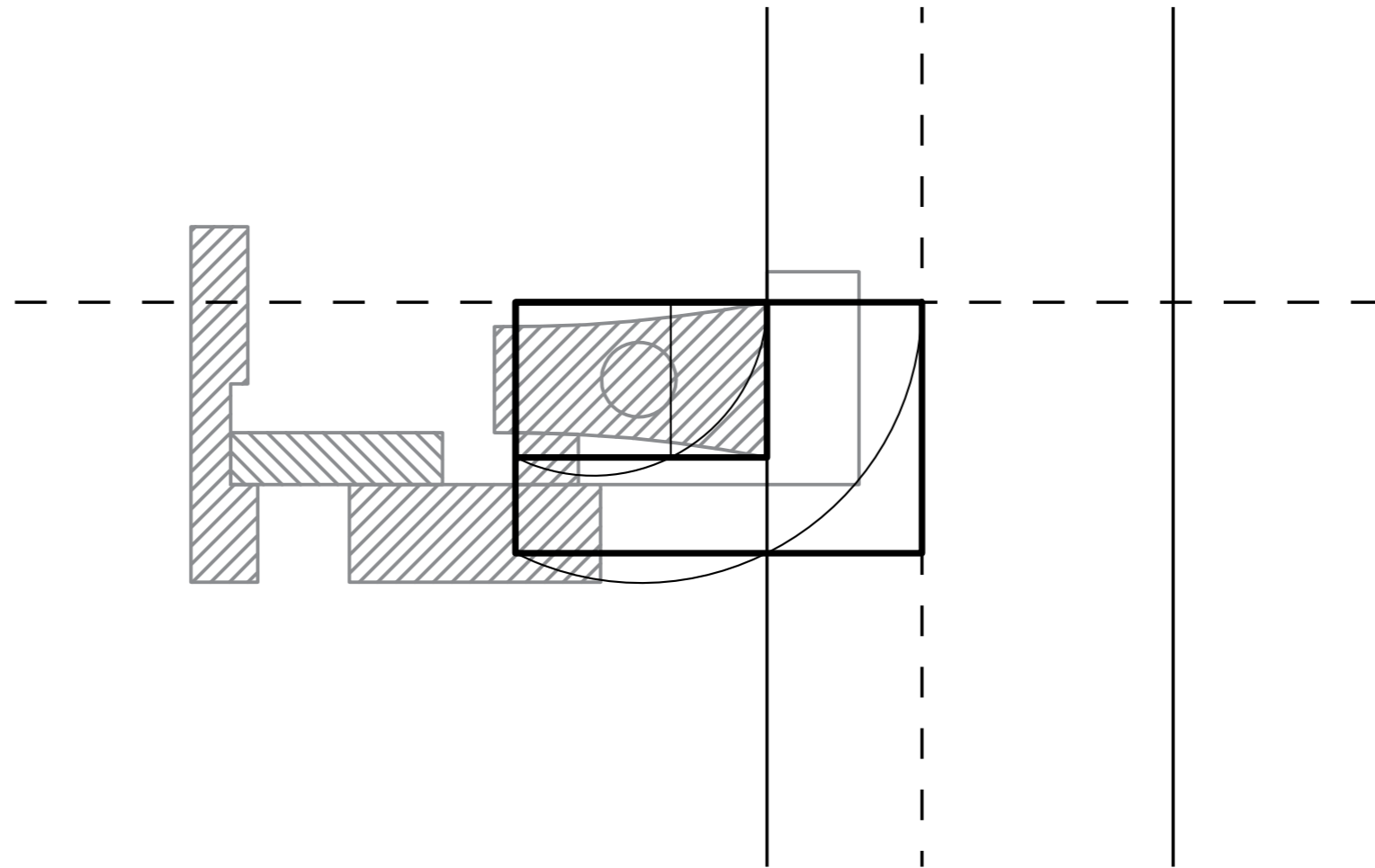


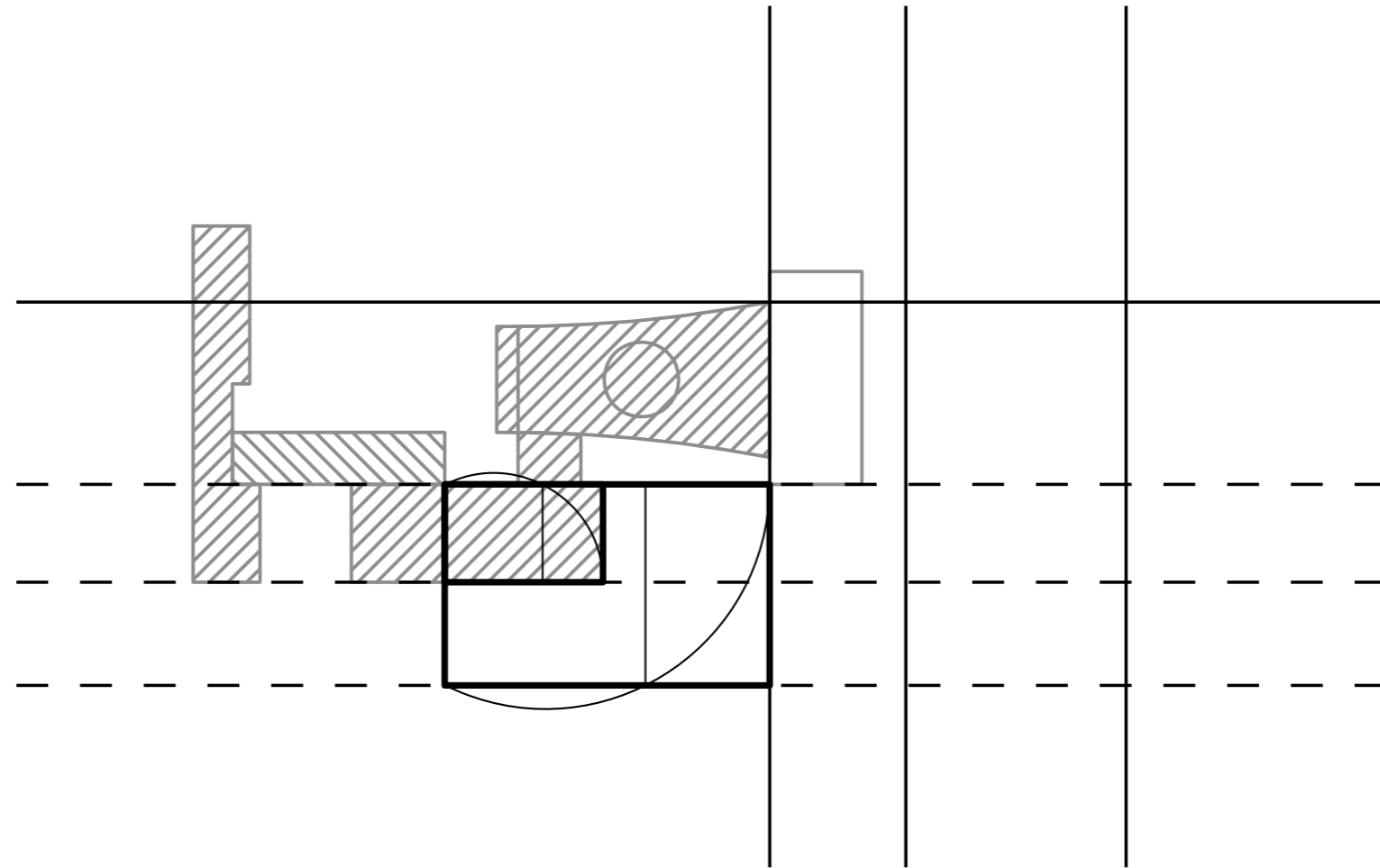


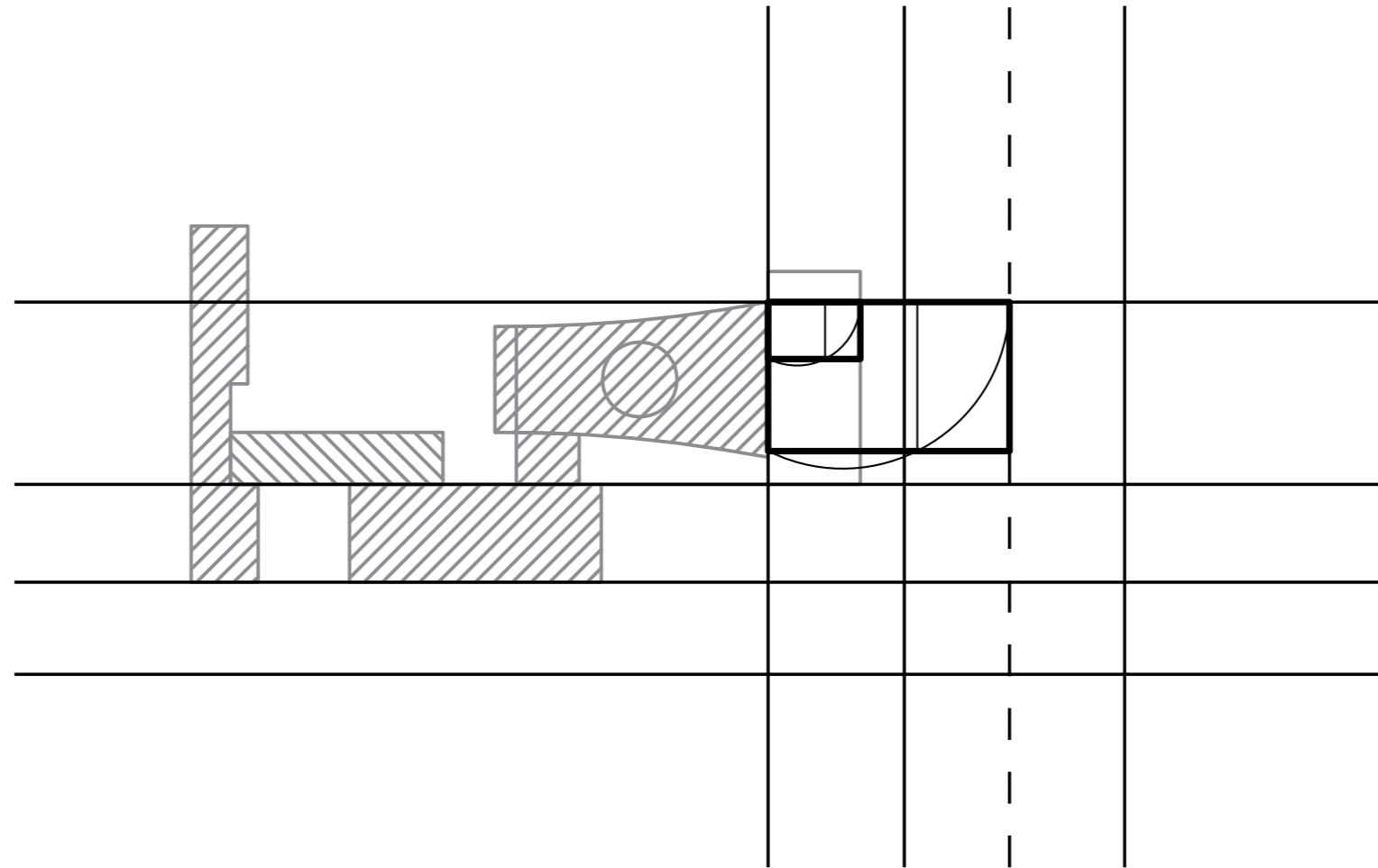


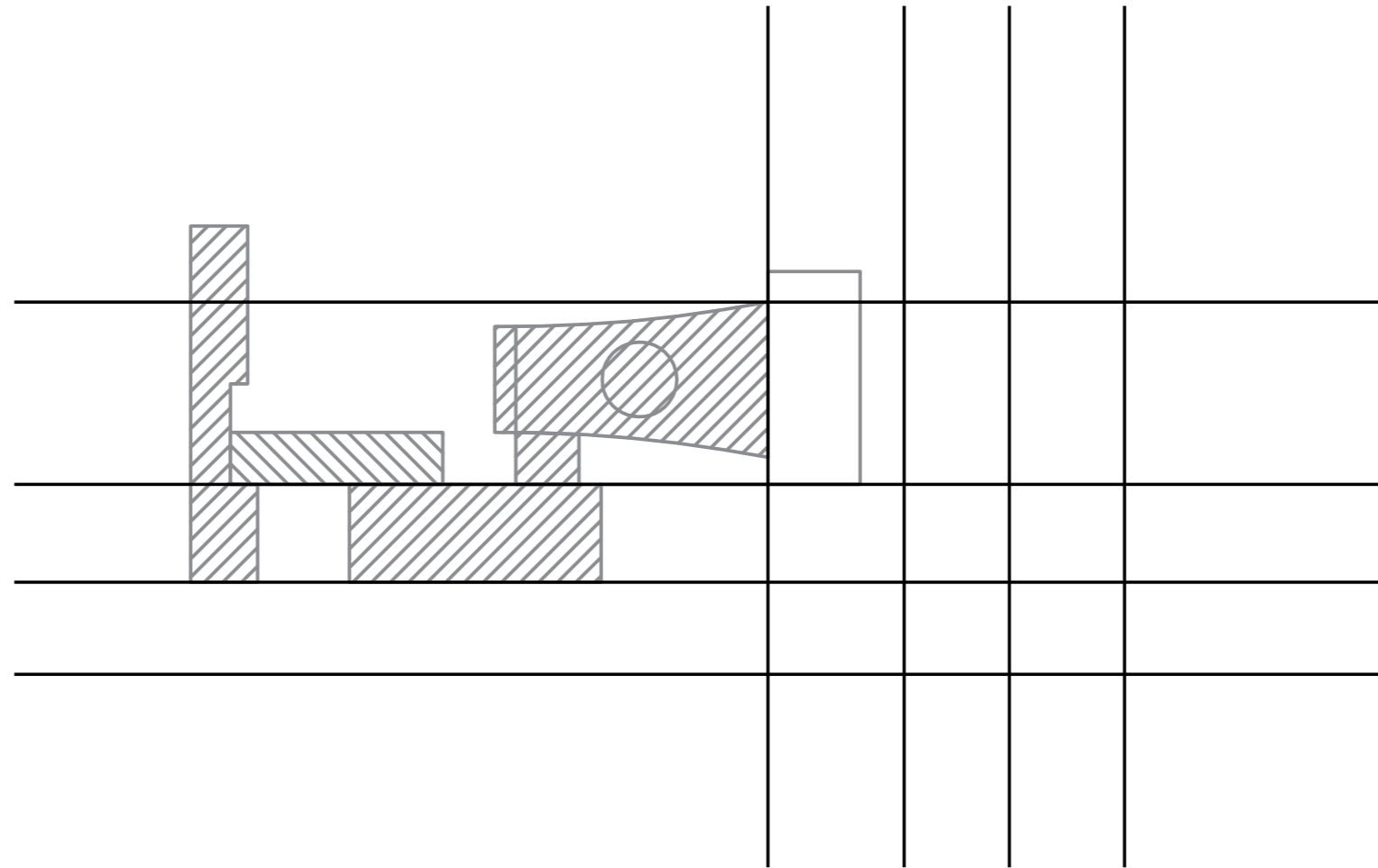


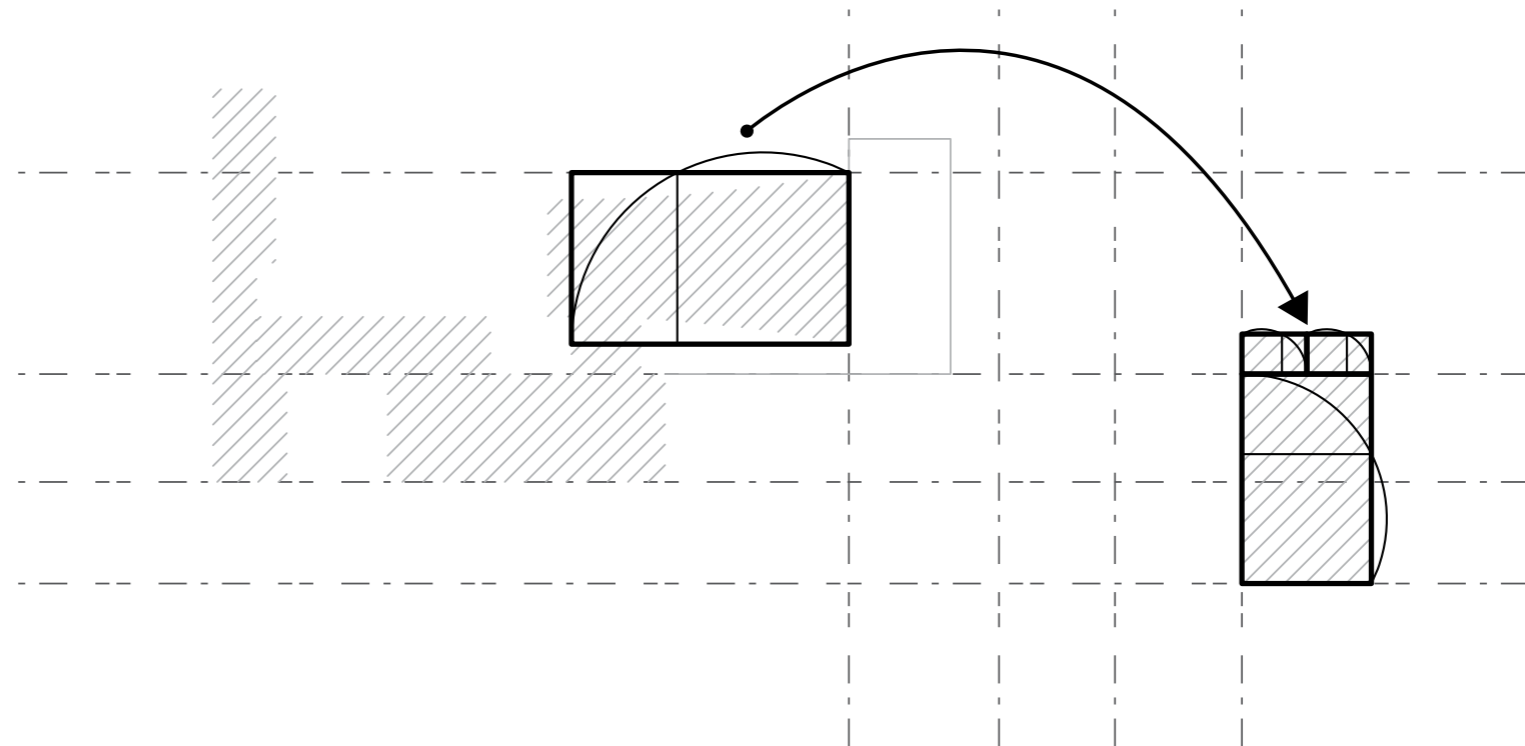


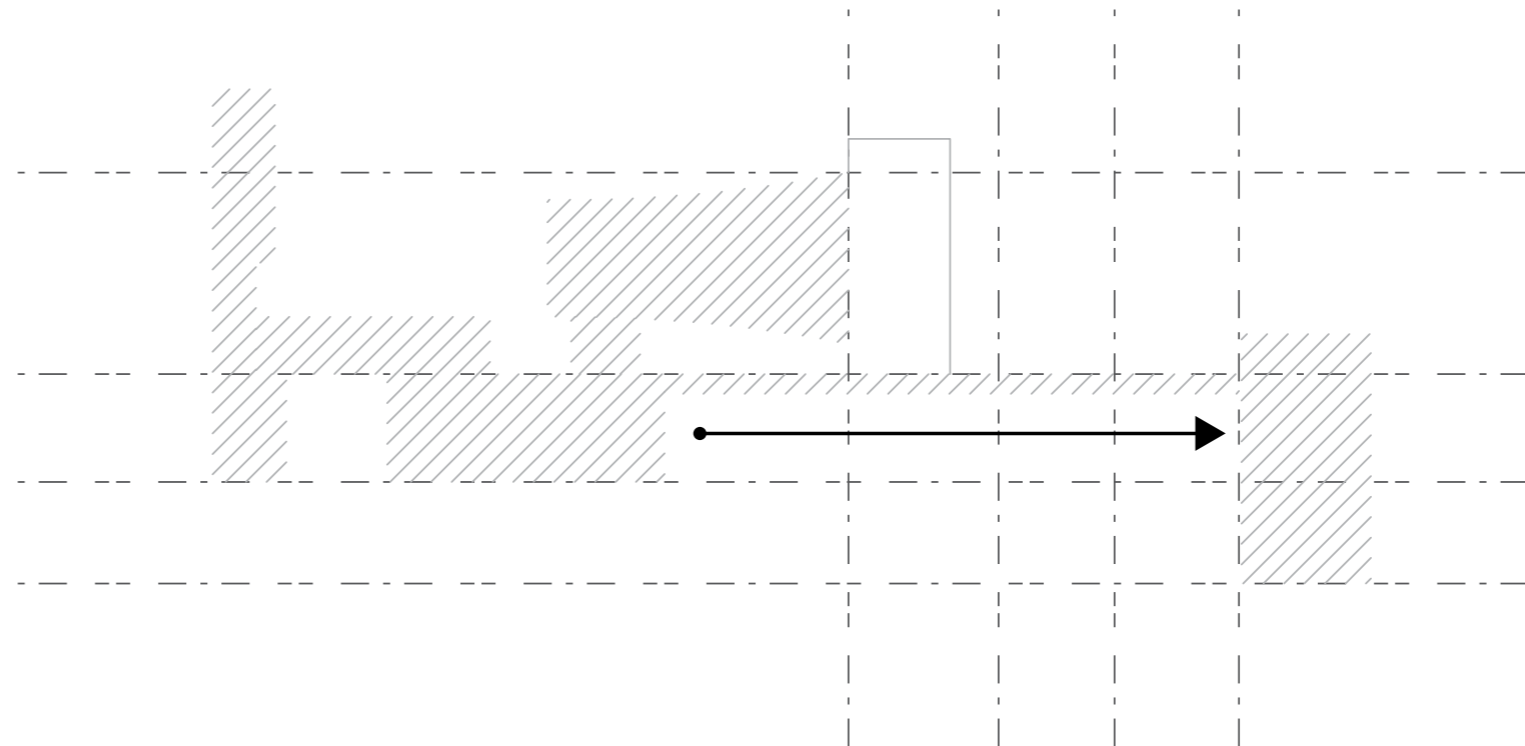


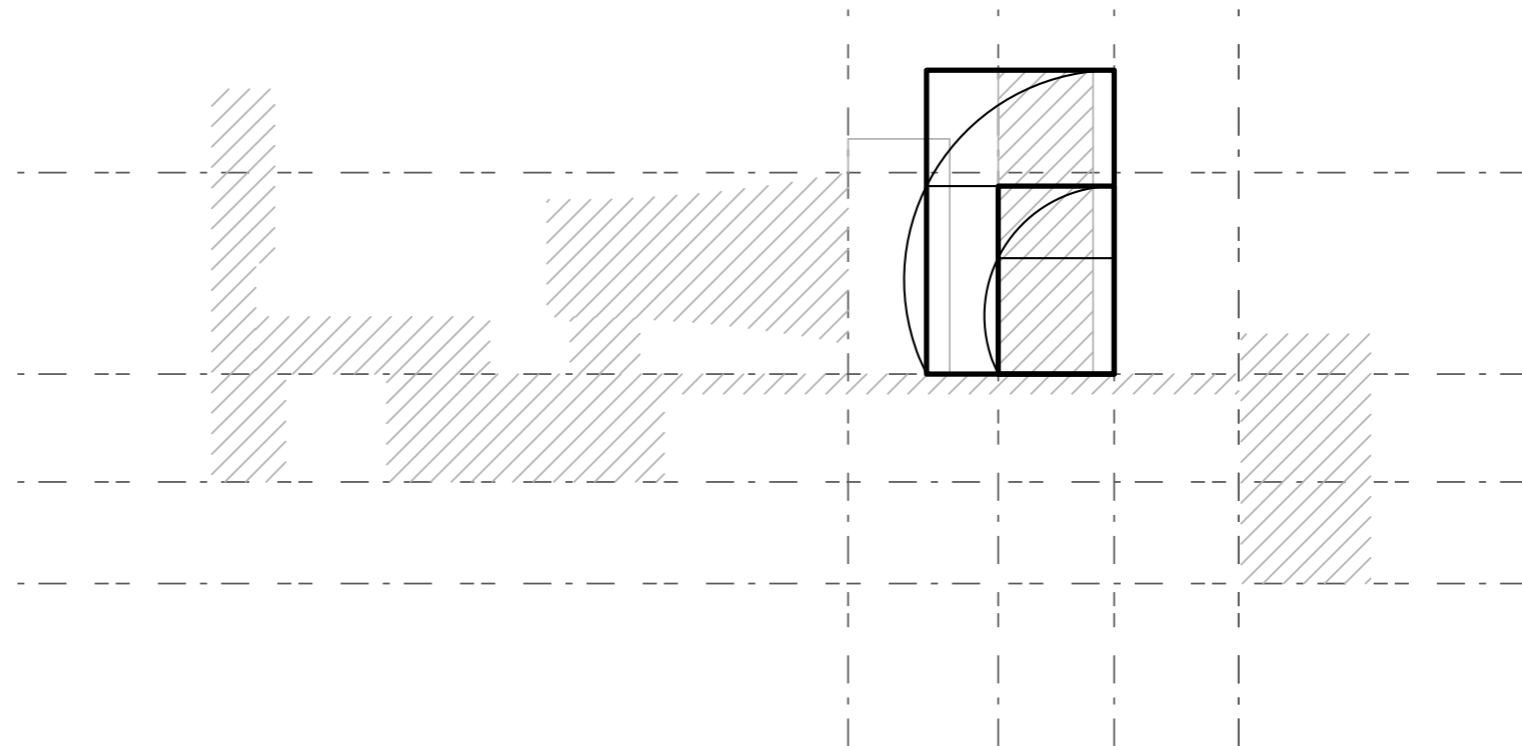


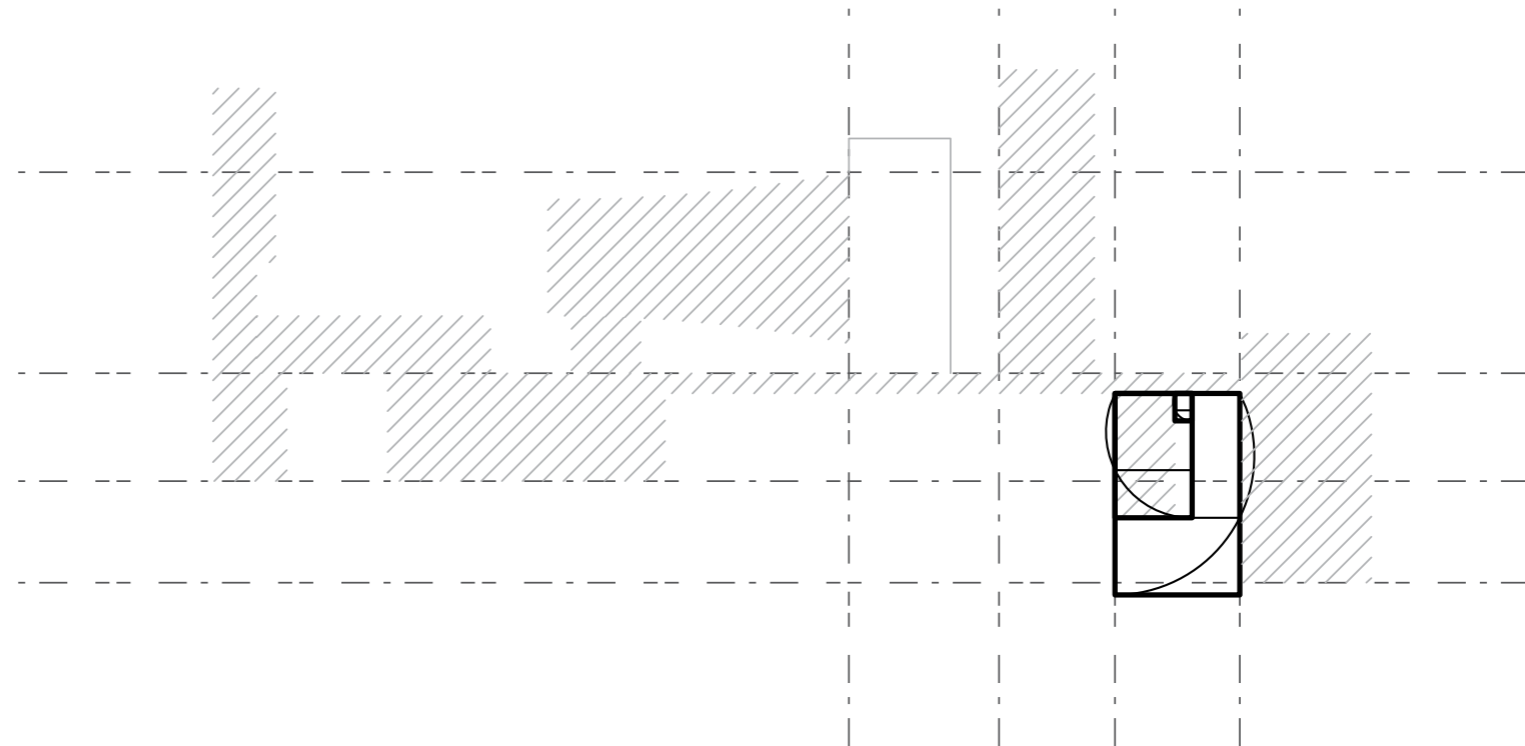


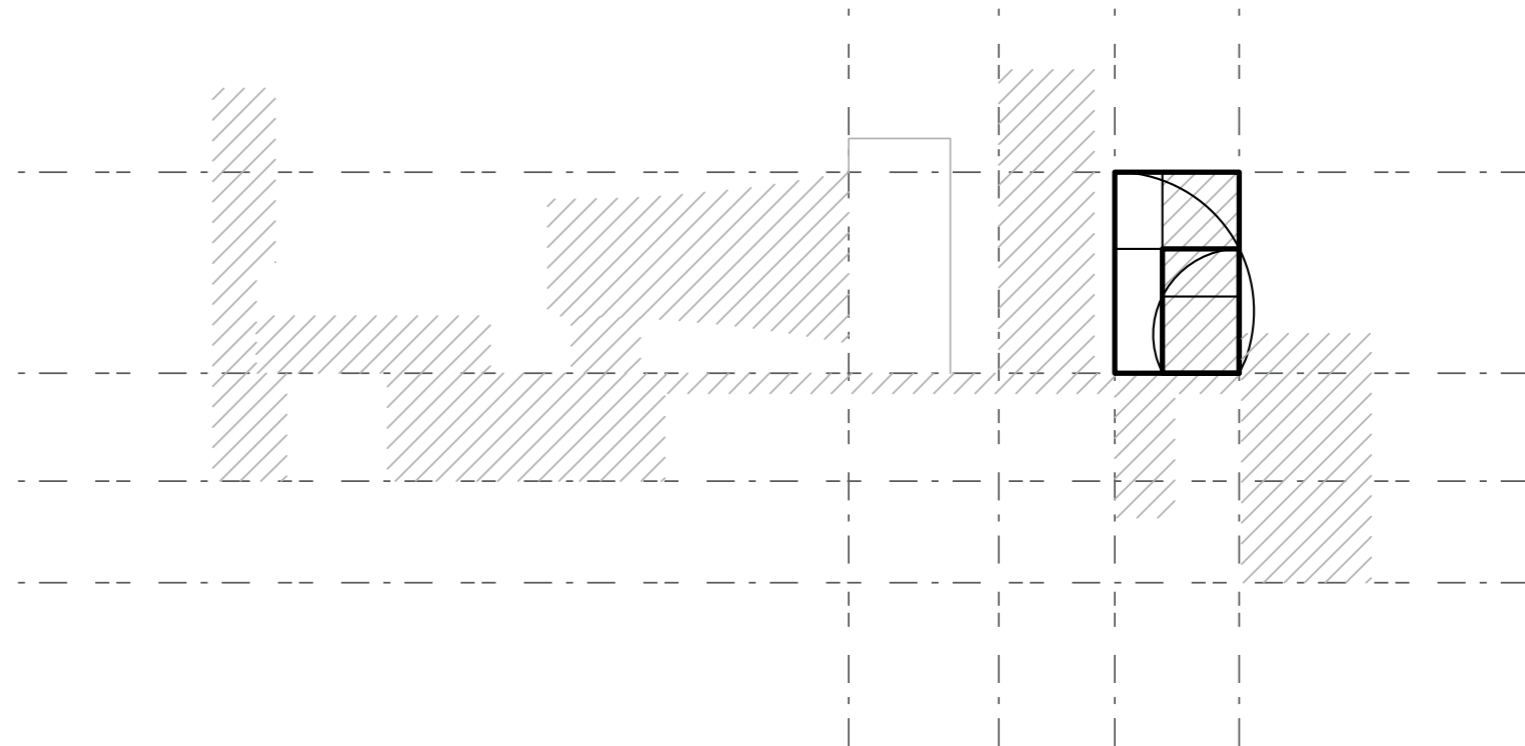


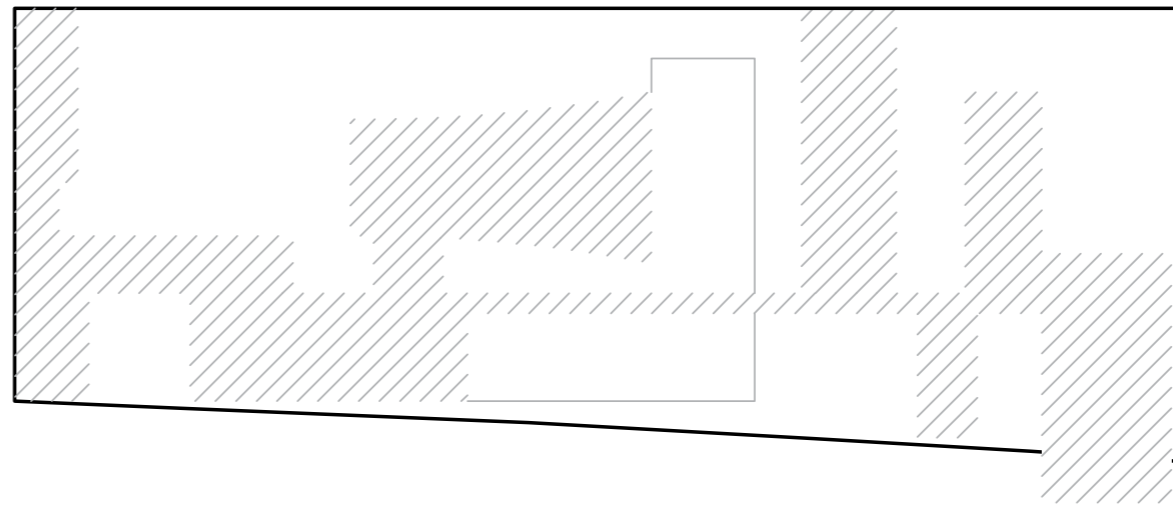


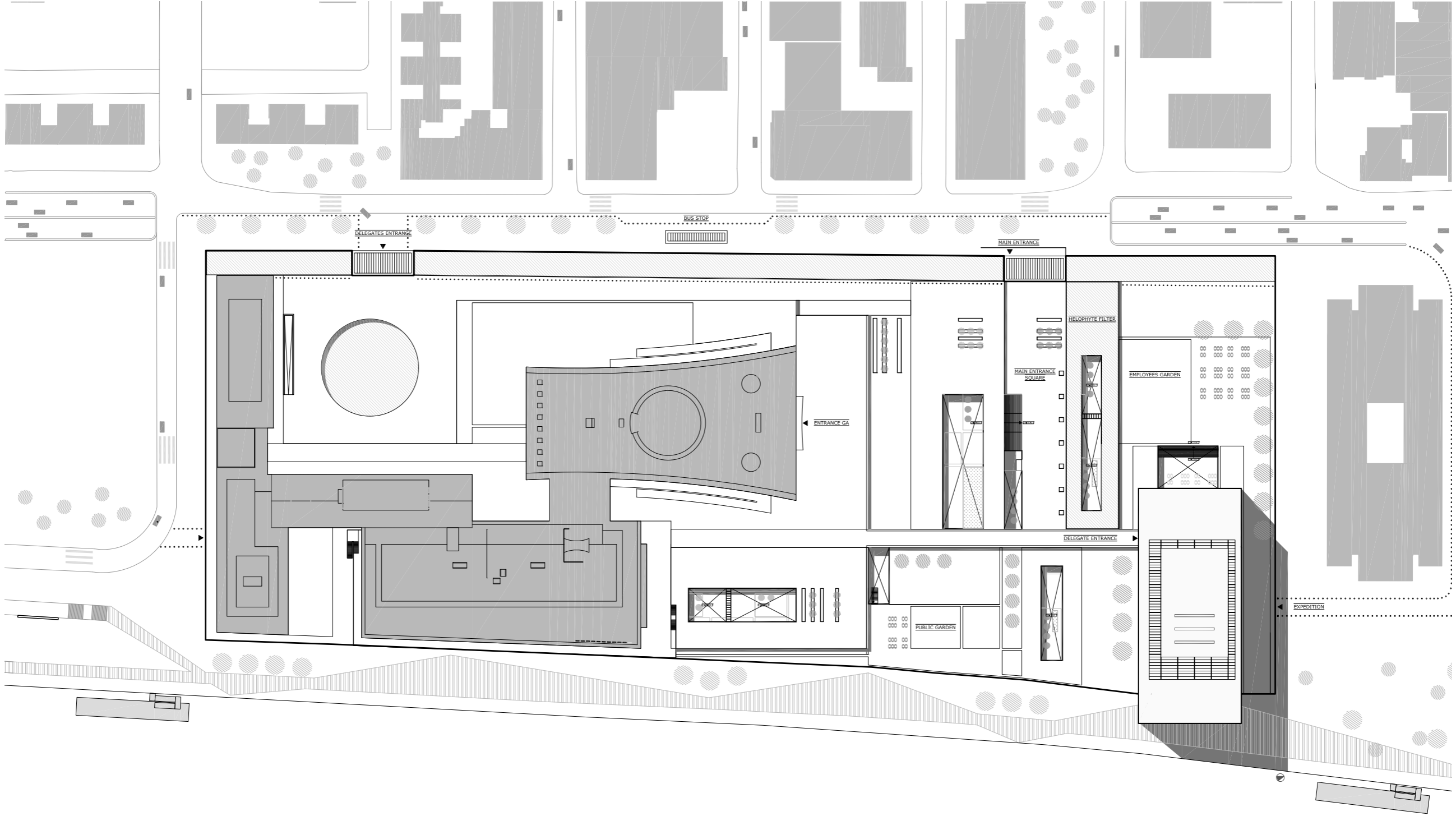


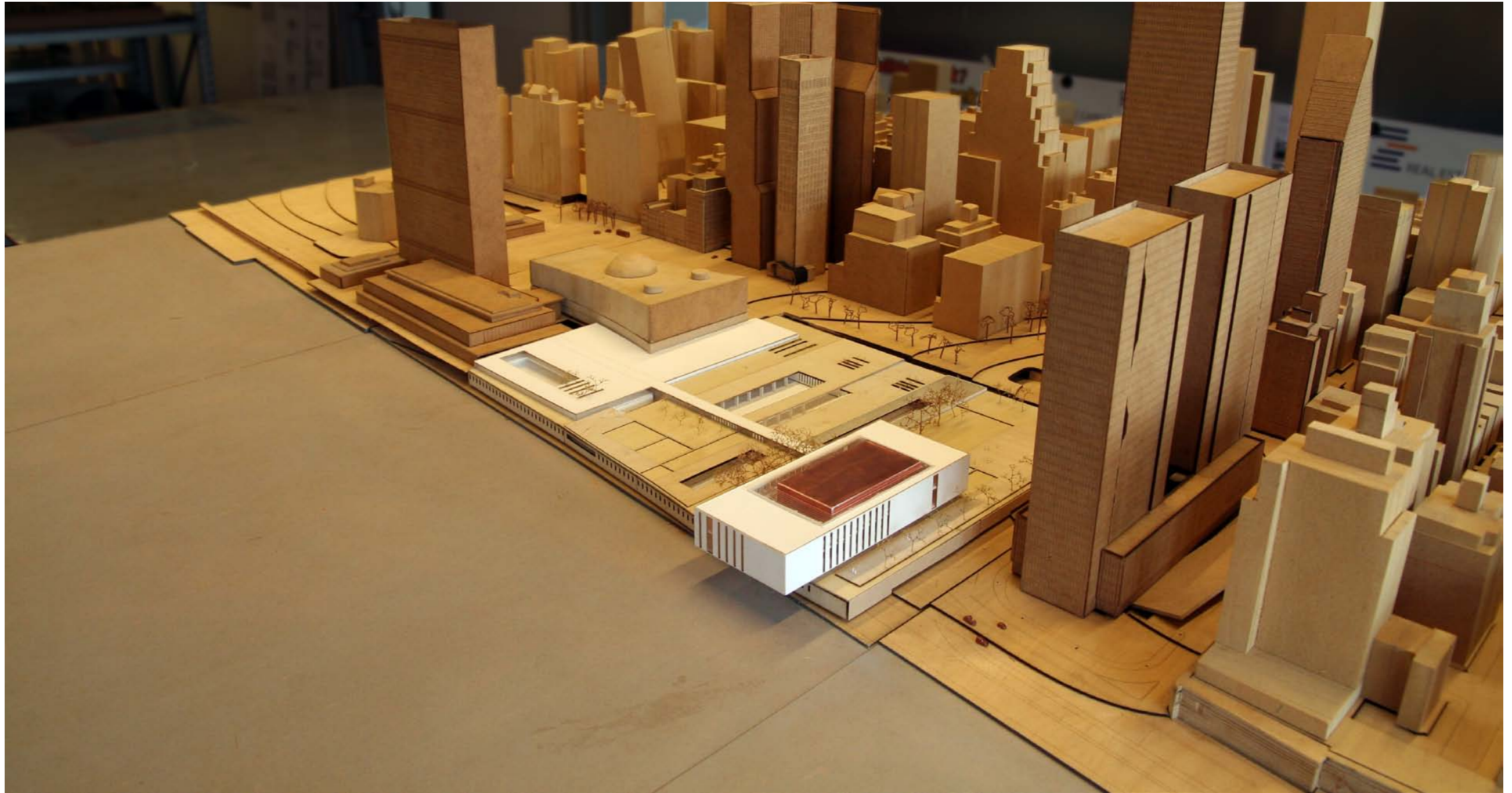




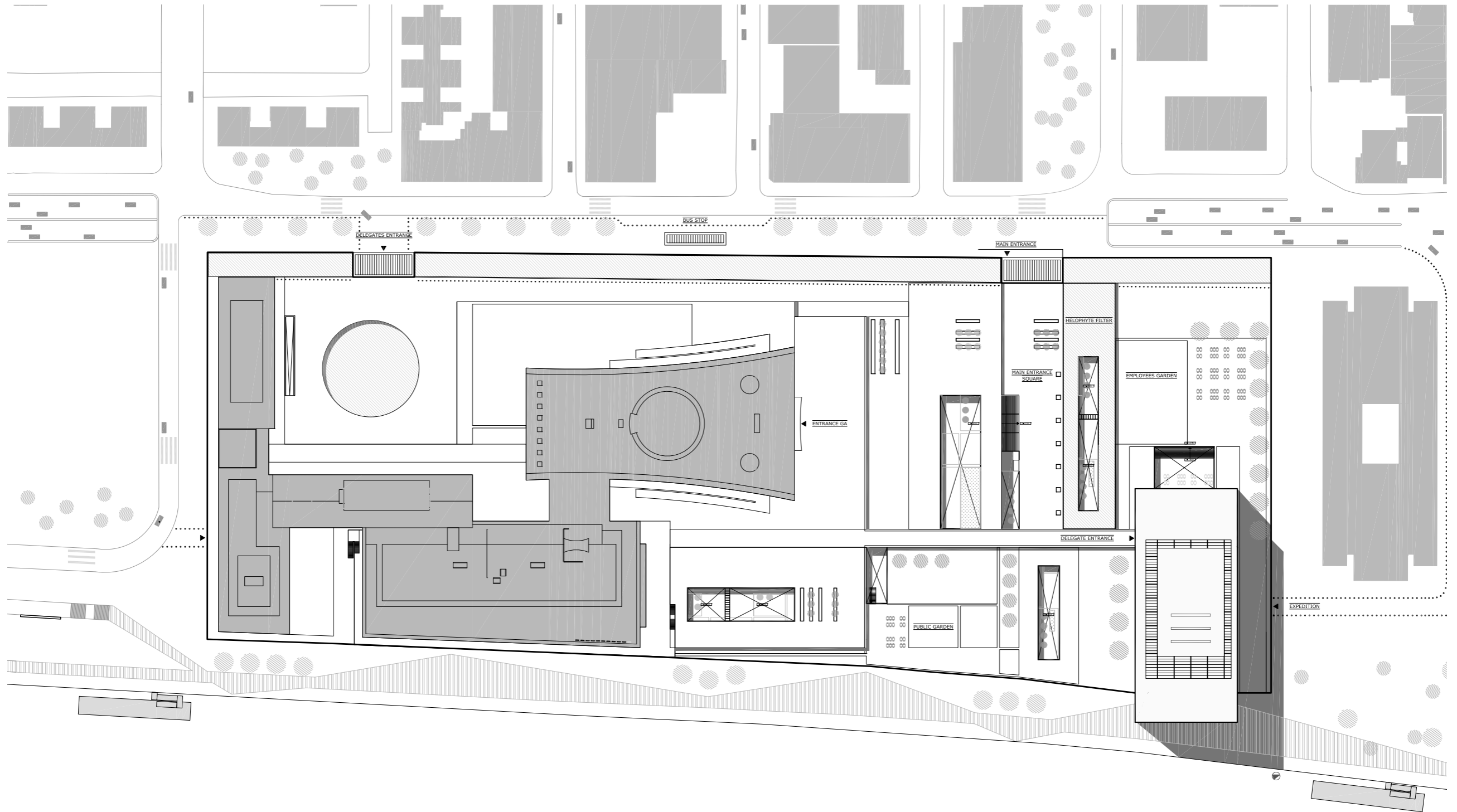


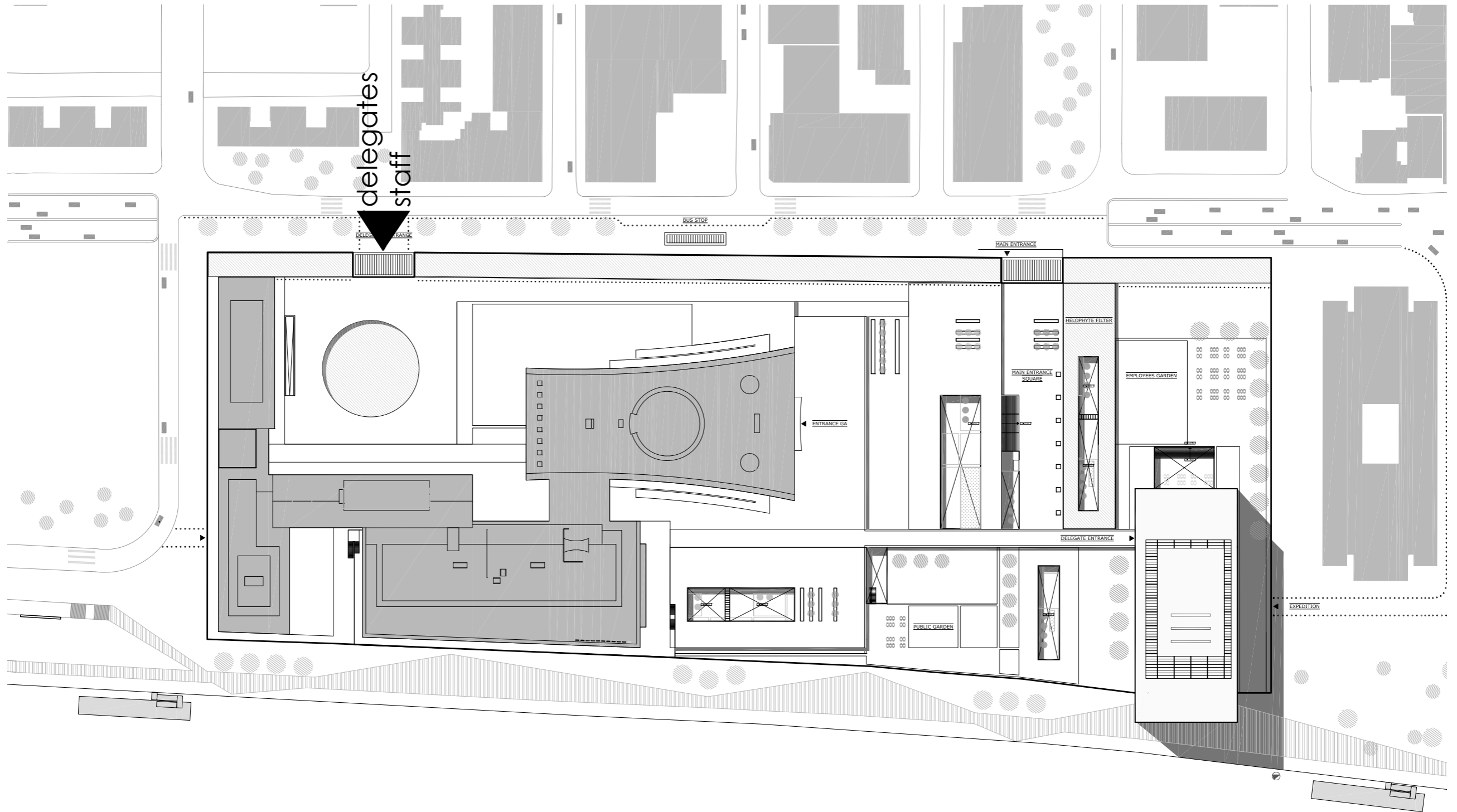


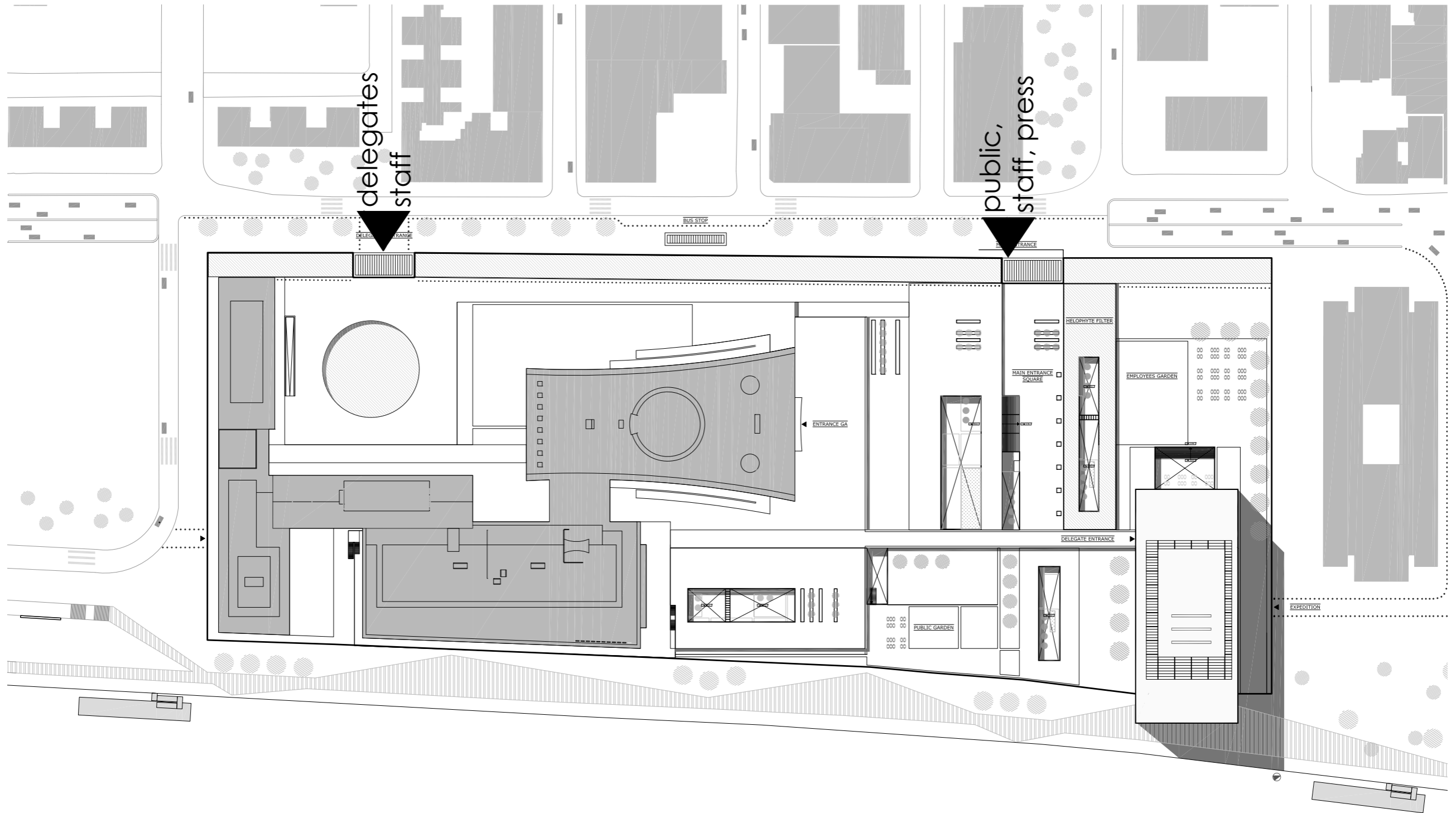


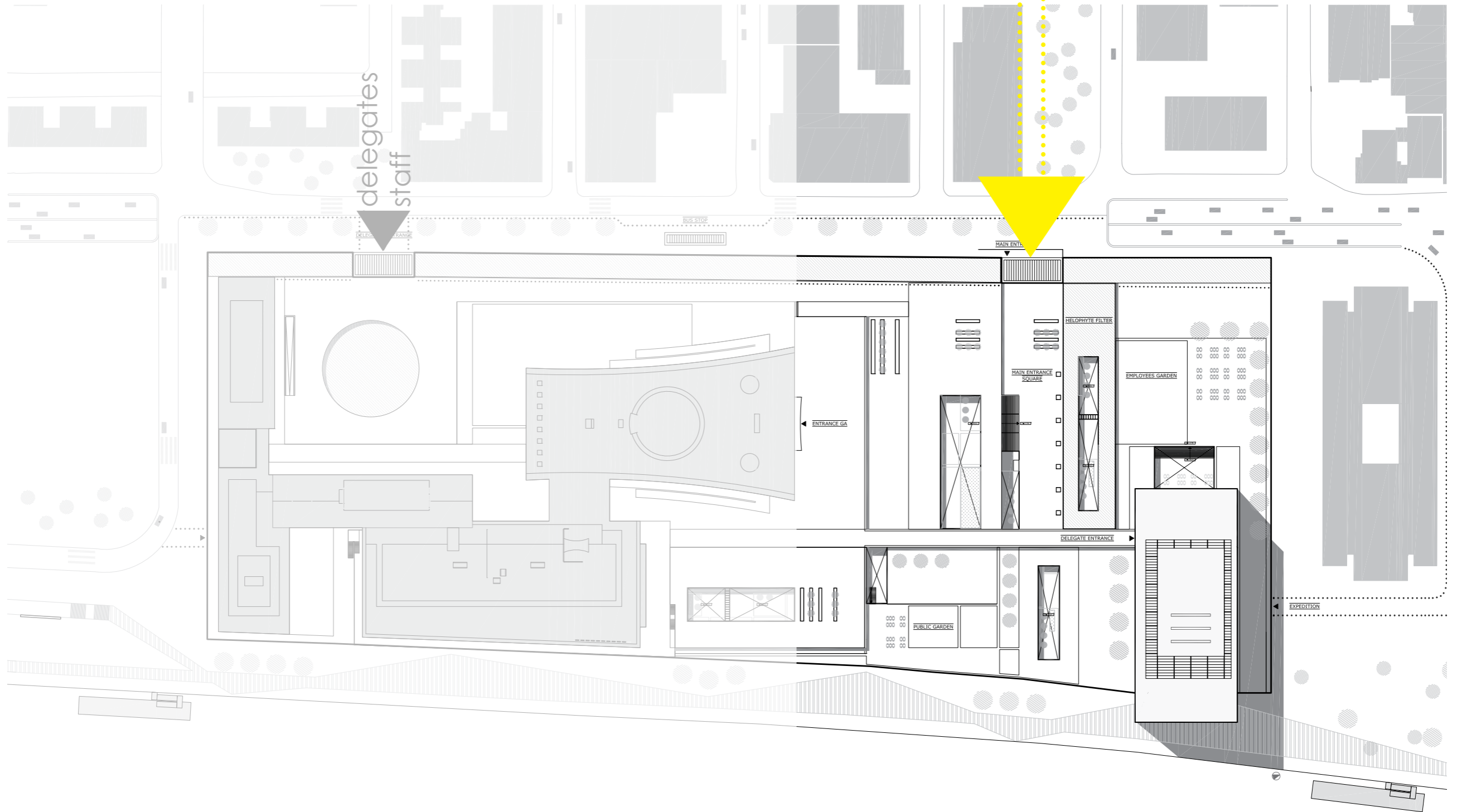


design lay-out









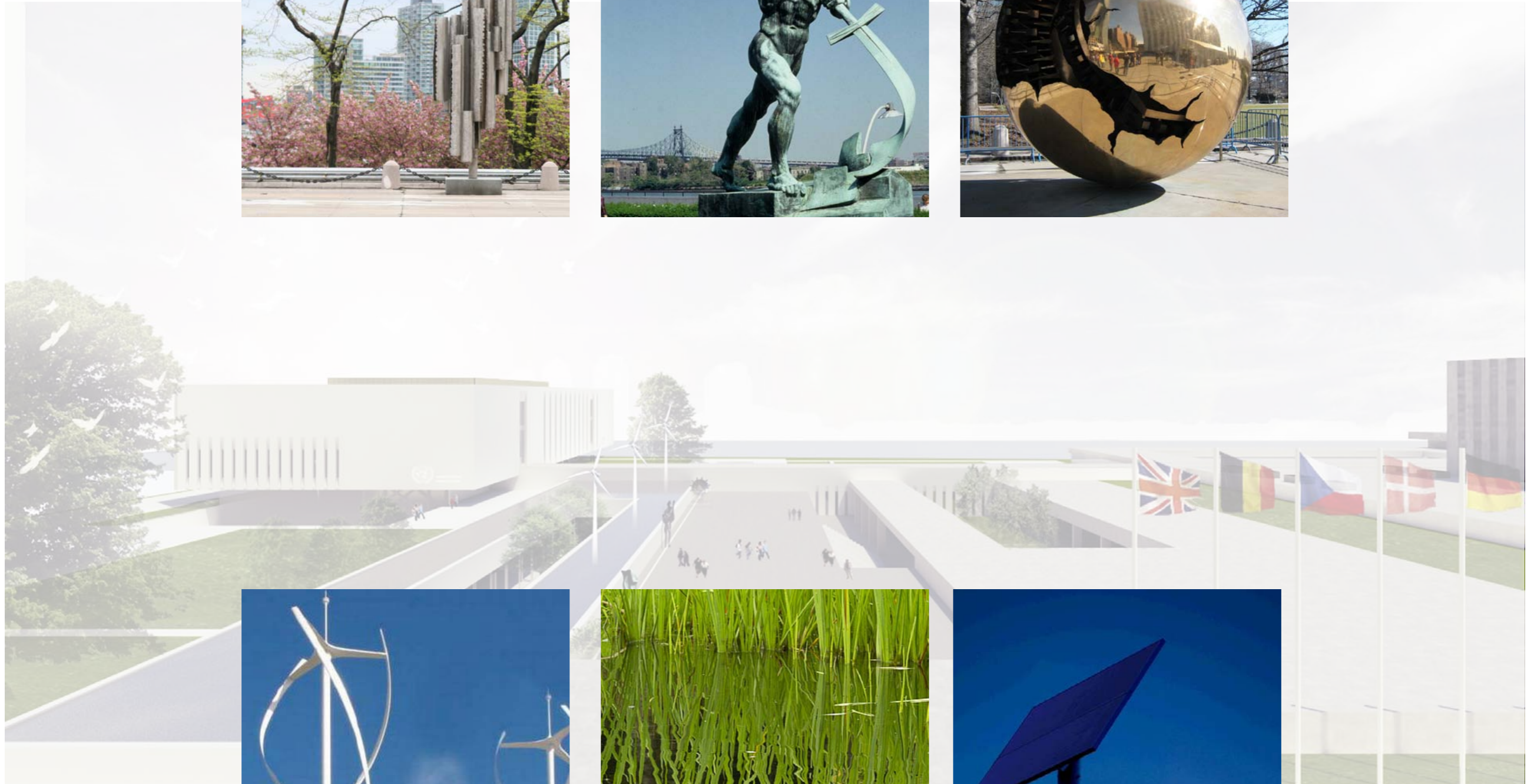
exterior view: entrance



exterior view: entrance square ground floor



impression exterior - public entrance



exterior view: entrance square ground floor



impression exterior - public entrance

exterior view: entrance square -1



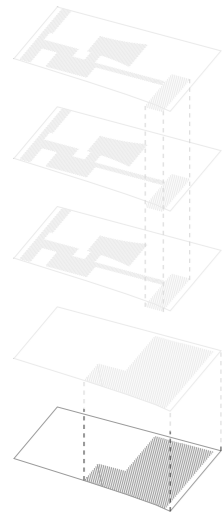
impression exterior - public entrance

exterior view: entrance square -1



impression exterior - public entrance

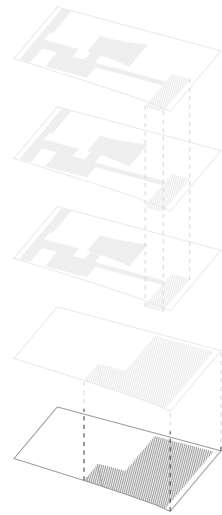
upon existing garage



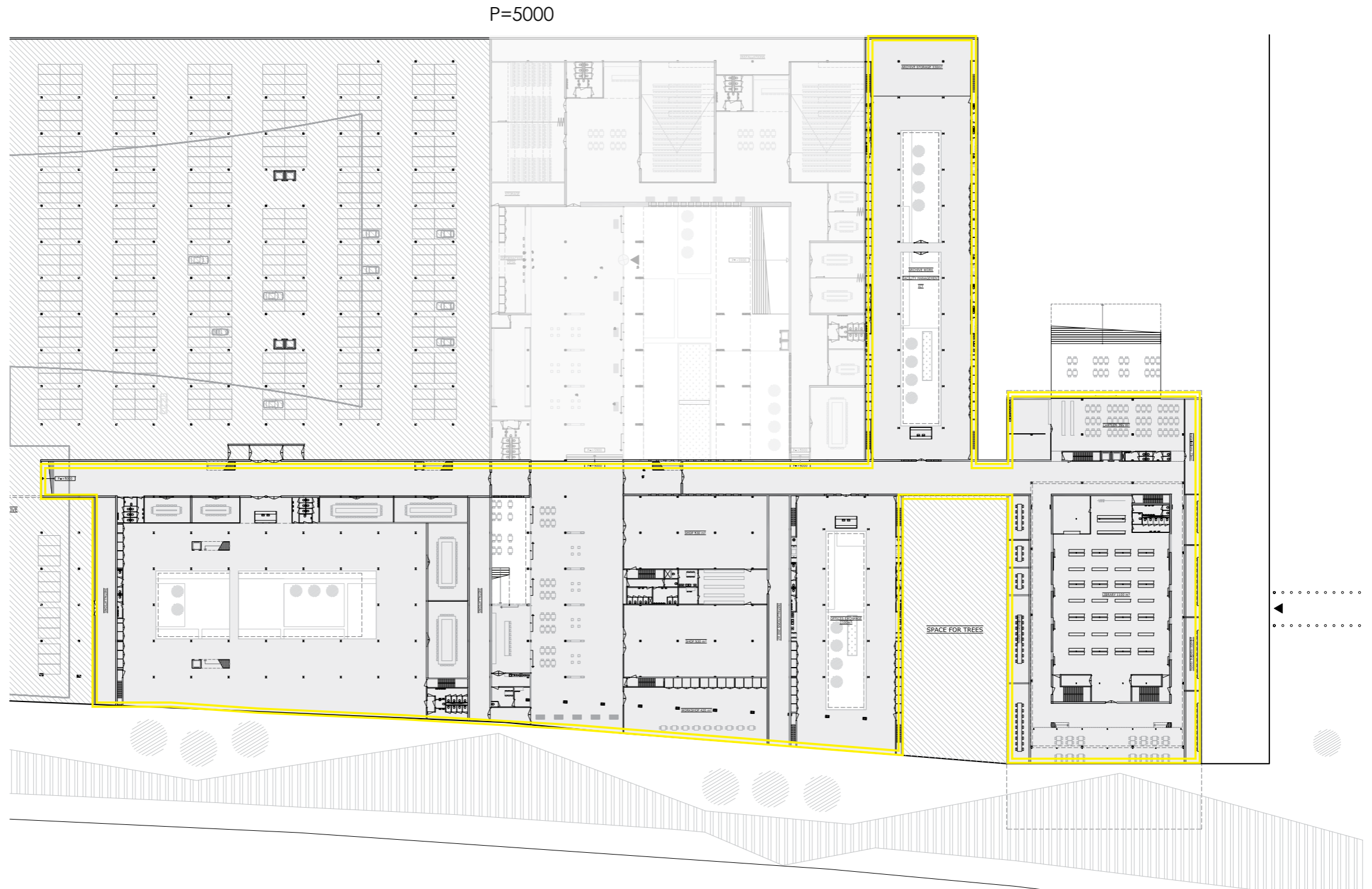
floorplan -1

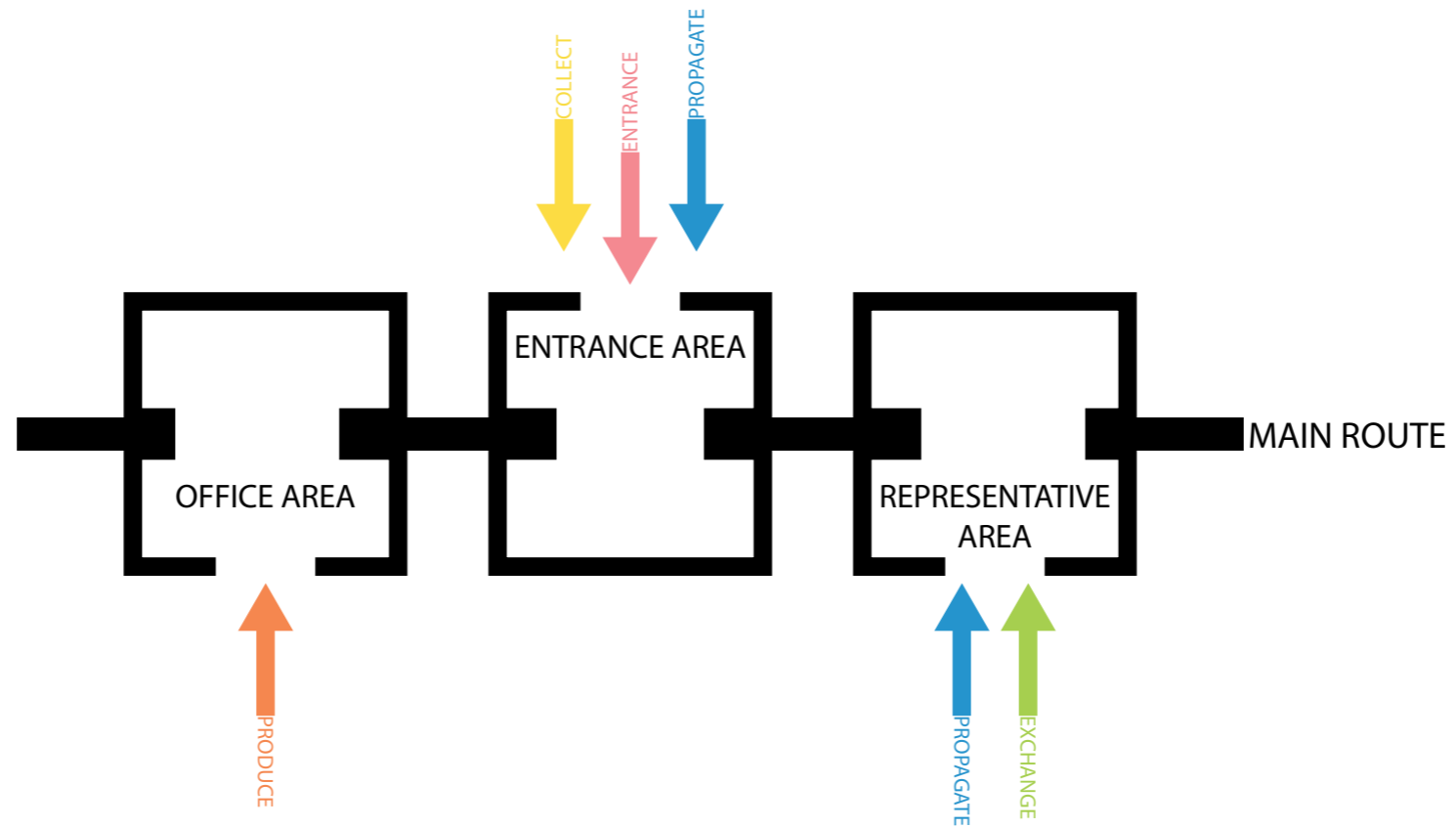


new build

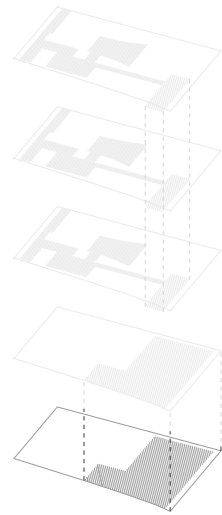


floorplan -1



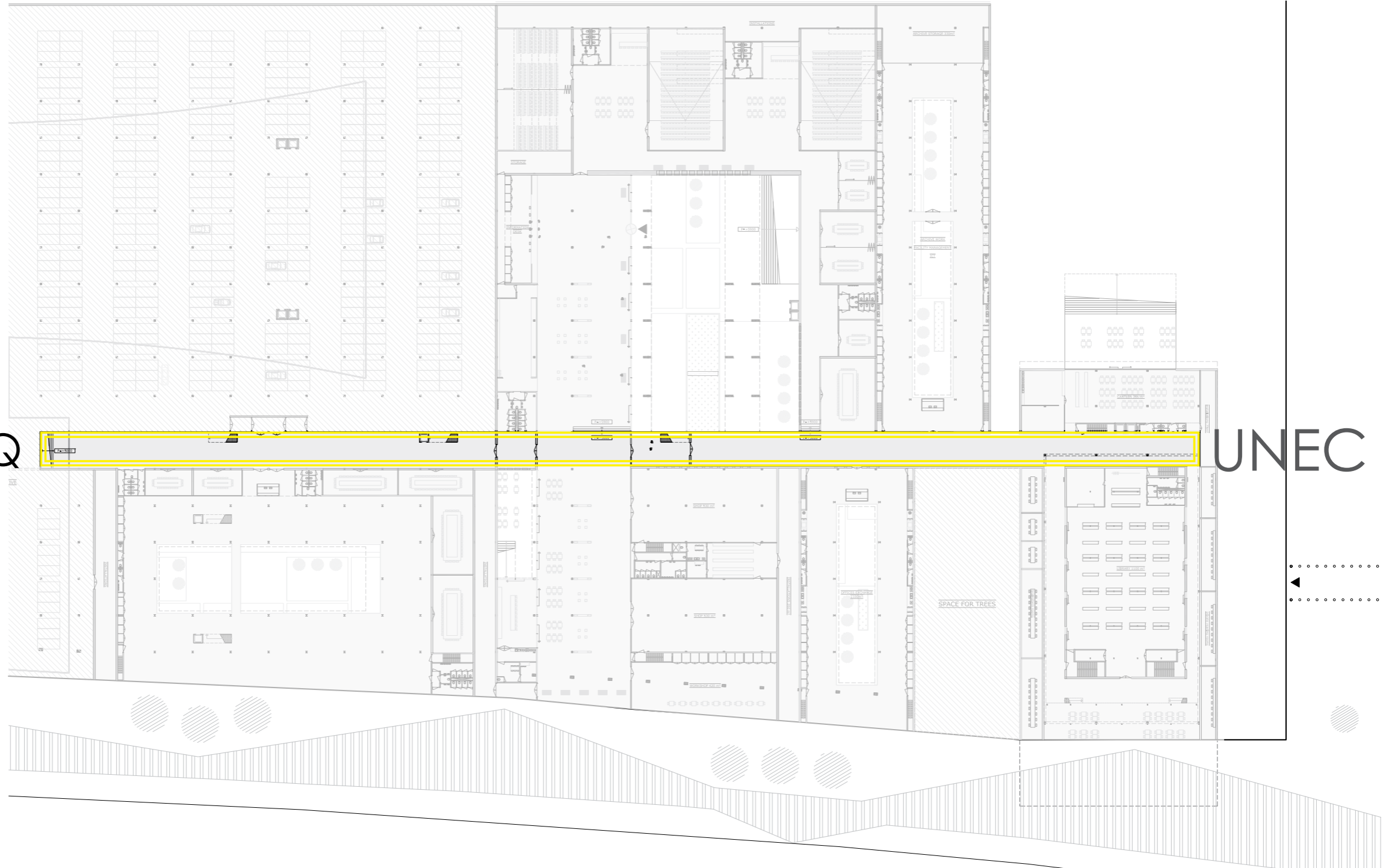


main route



floorplan -1

UNHQ

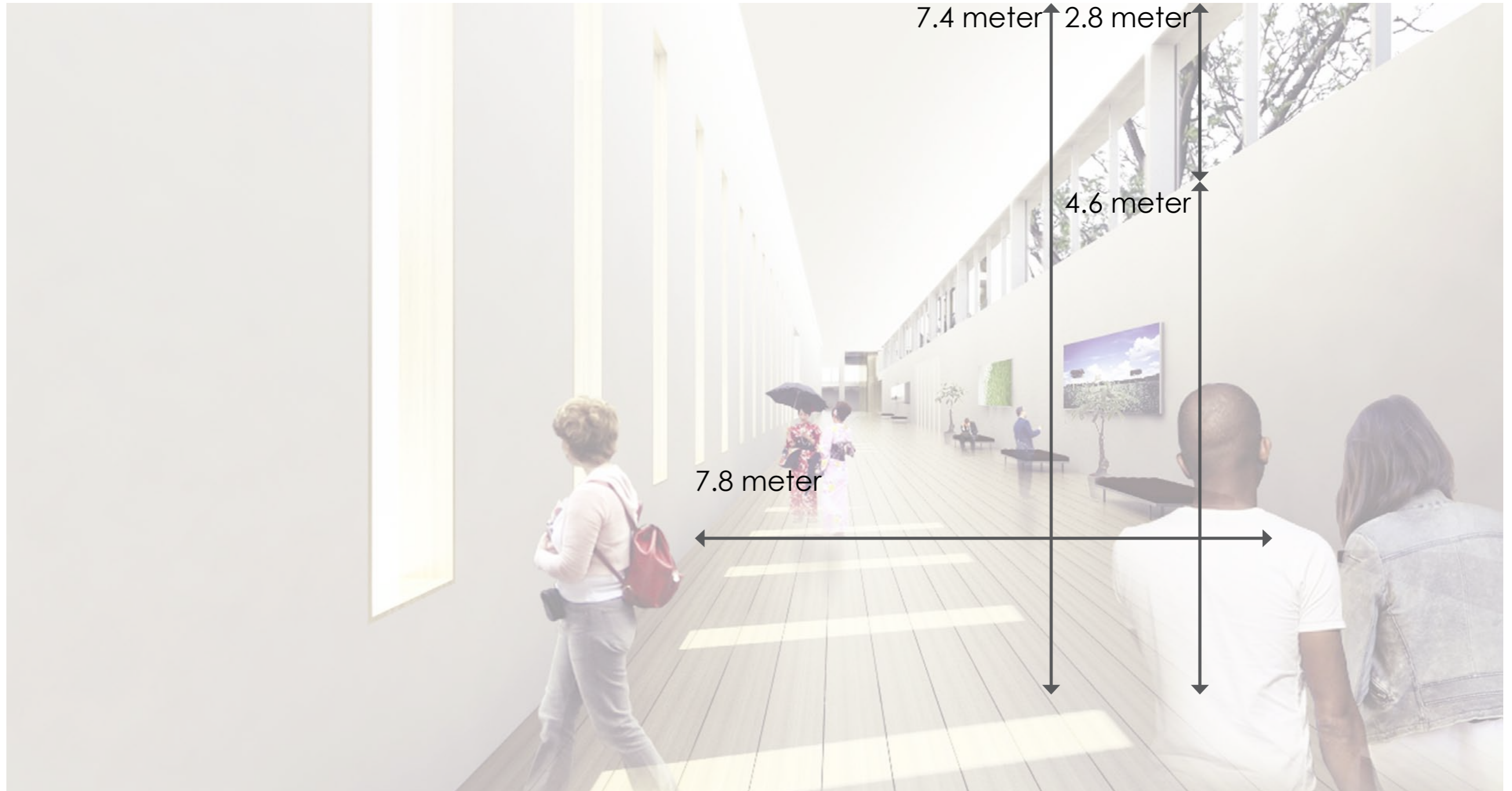


UNEC

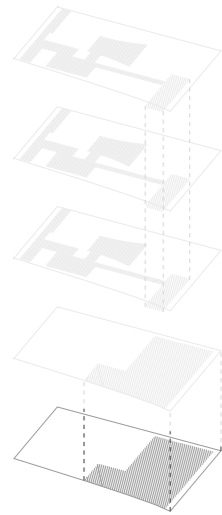
interior view main route



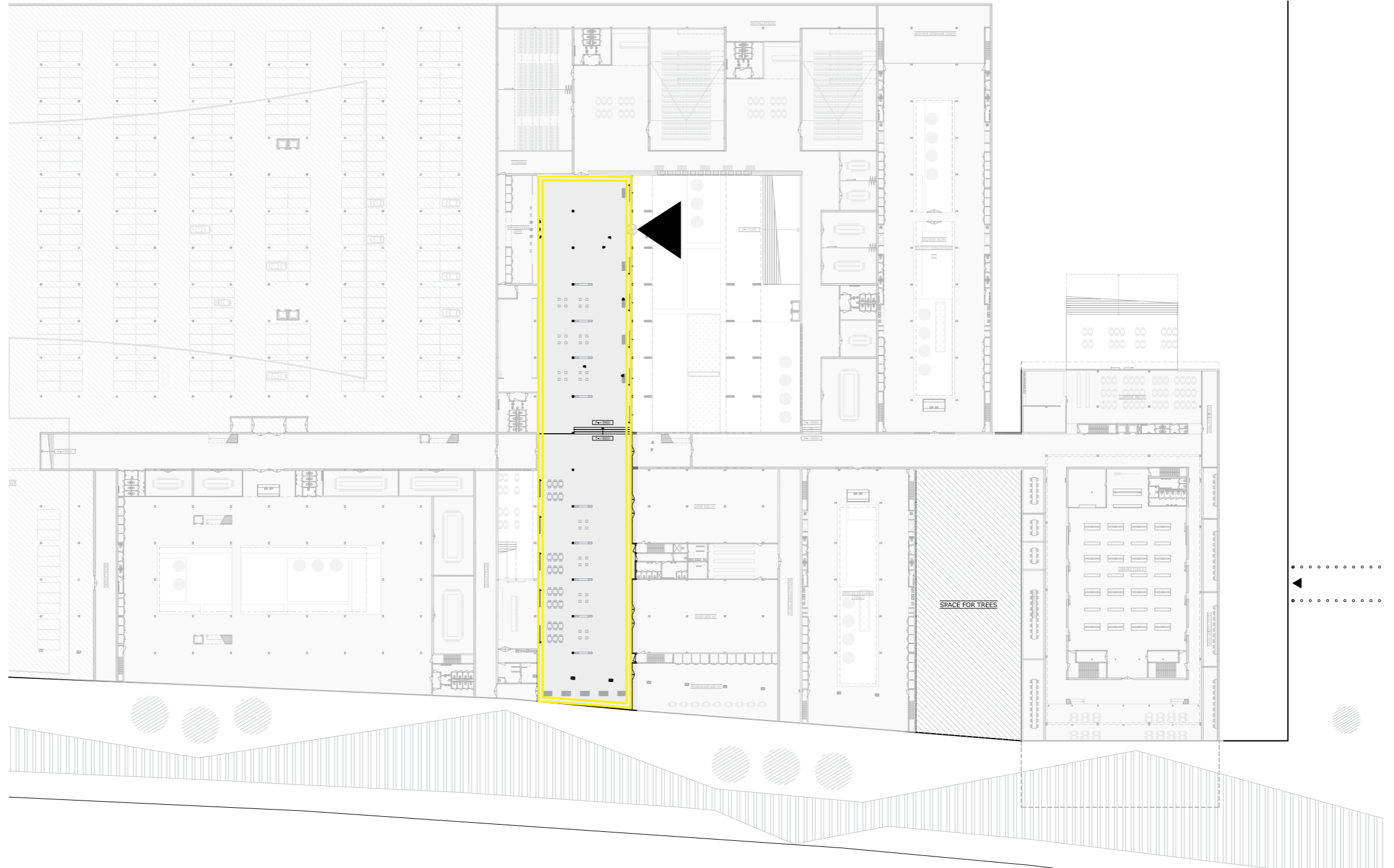
interior view main route



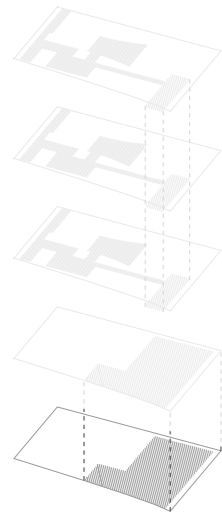
entrance zone



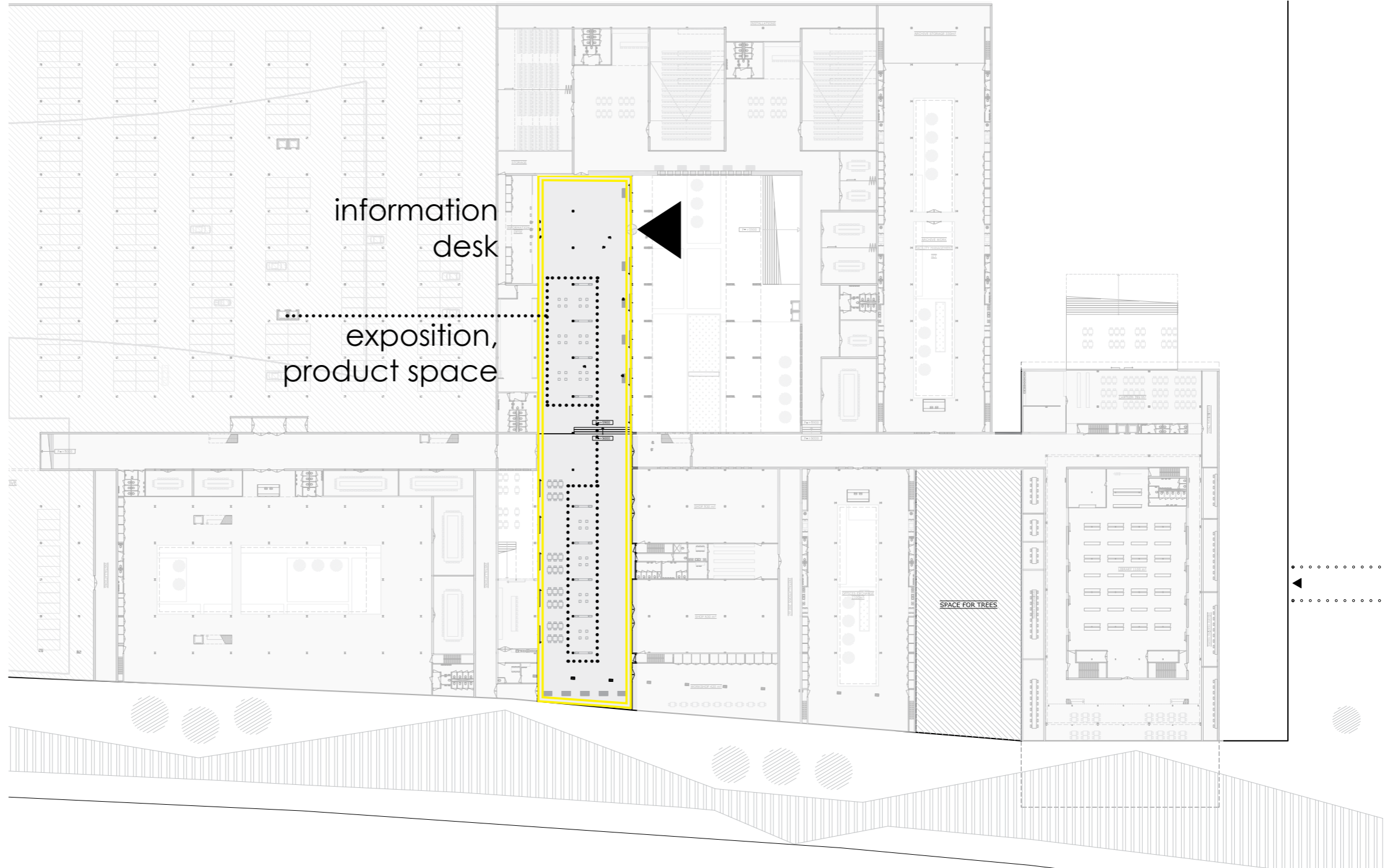
floorplan -1



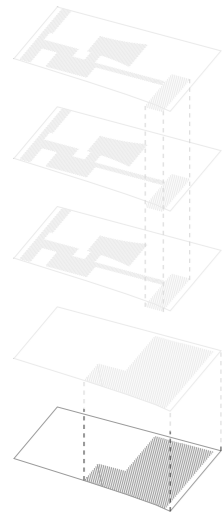
entrance zone



floorplan -1



entrance zone



floorplan -1

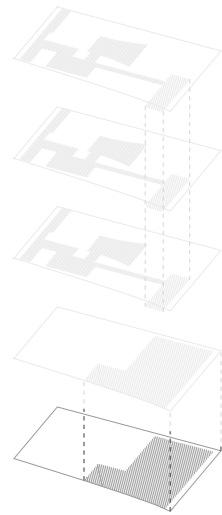


interior view entrance

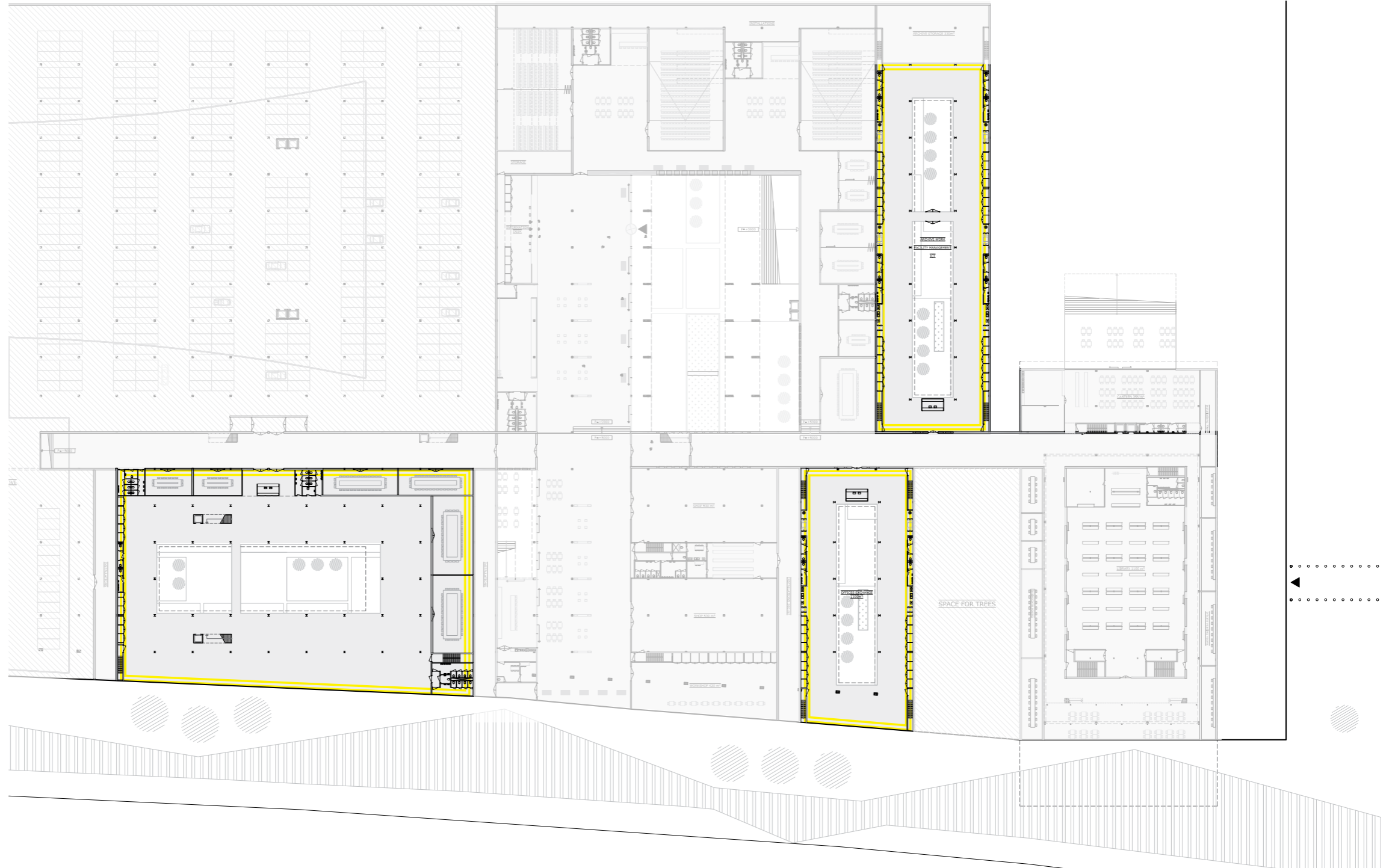


impression interior - entrance area

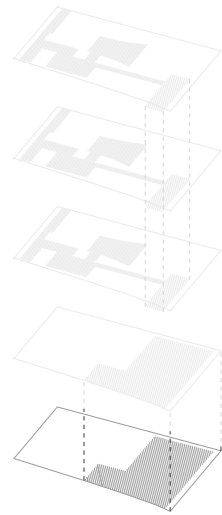
office zone



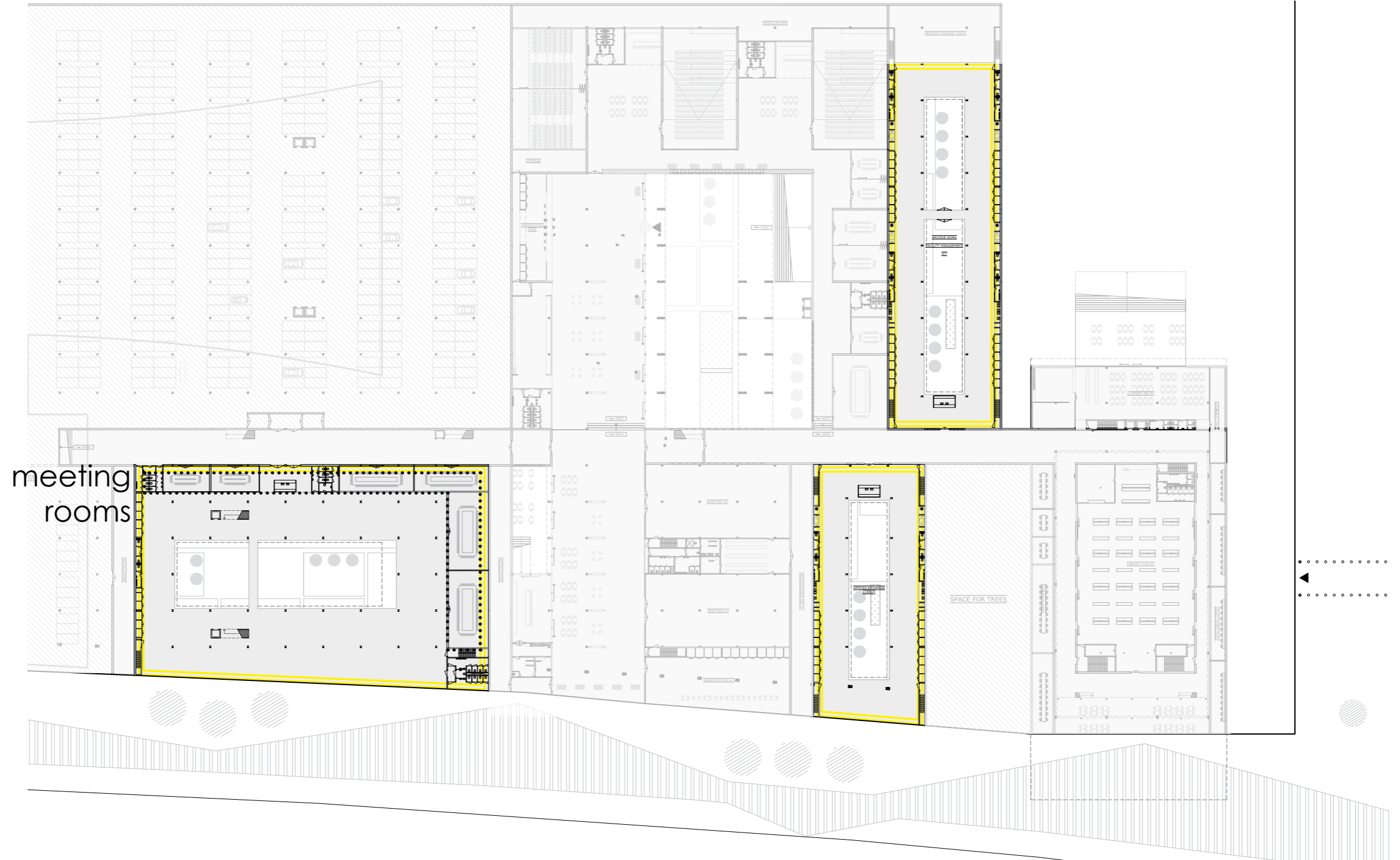
floorplan -1



office zone



floorplan -1



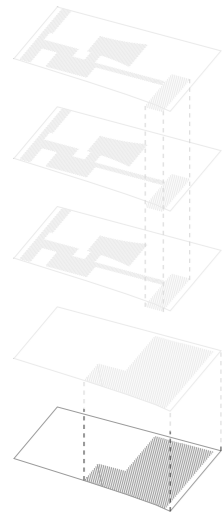
meeting
rooms

SPACE FOR TREES

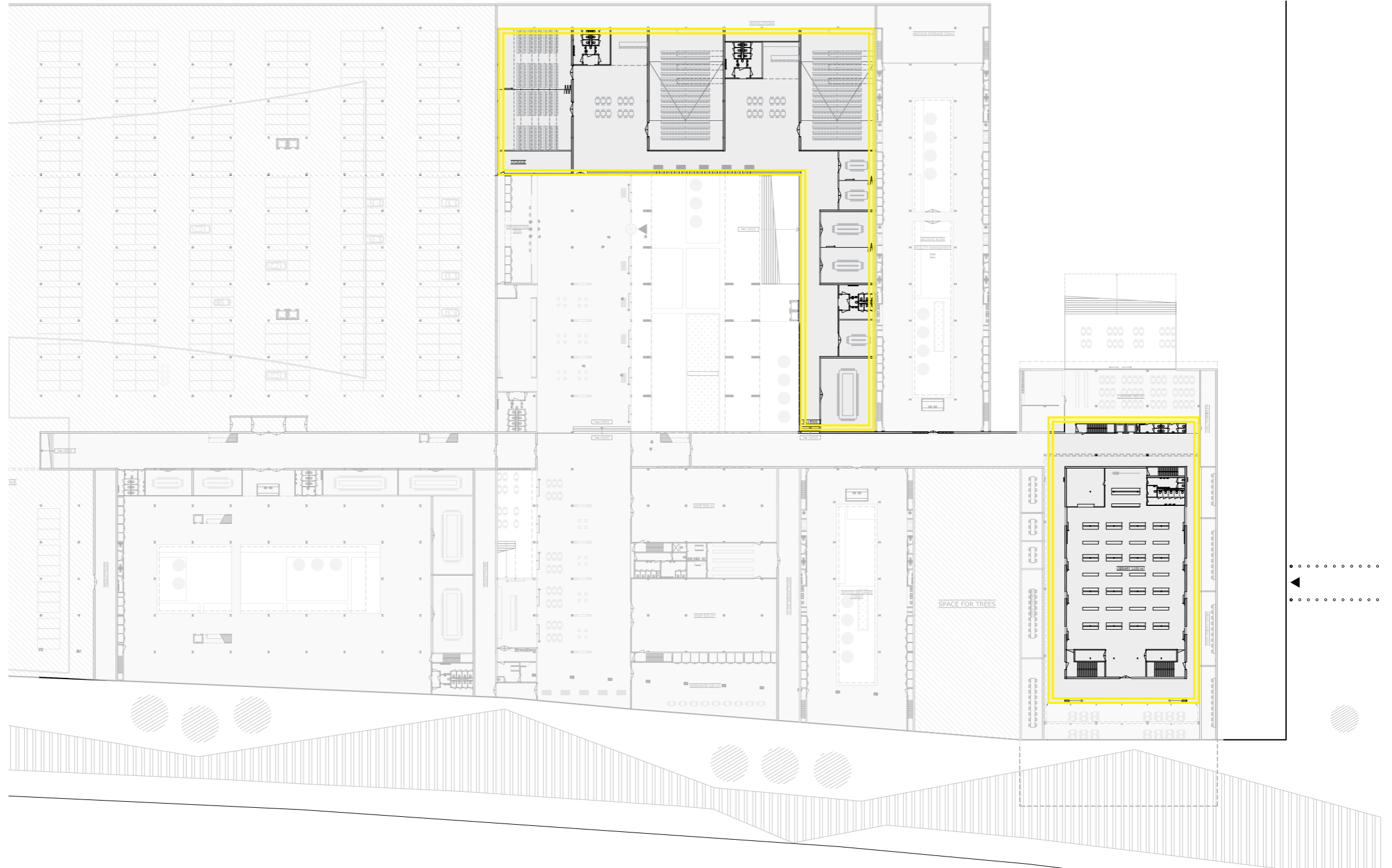
flexible workspaces



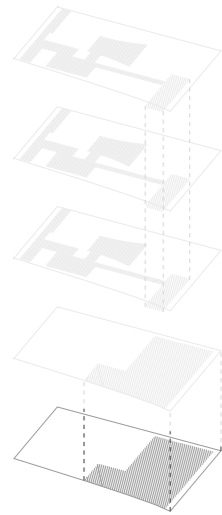
representative zone



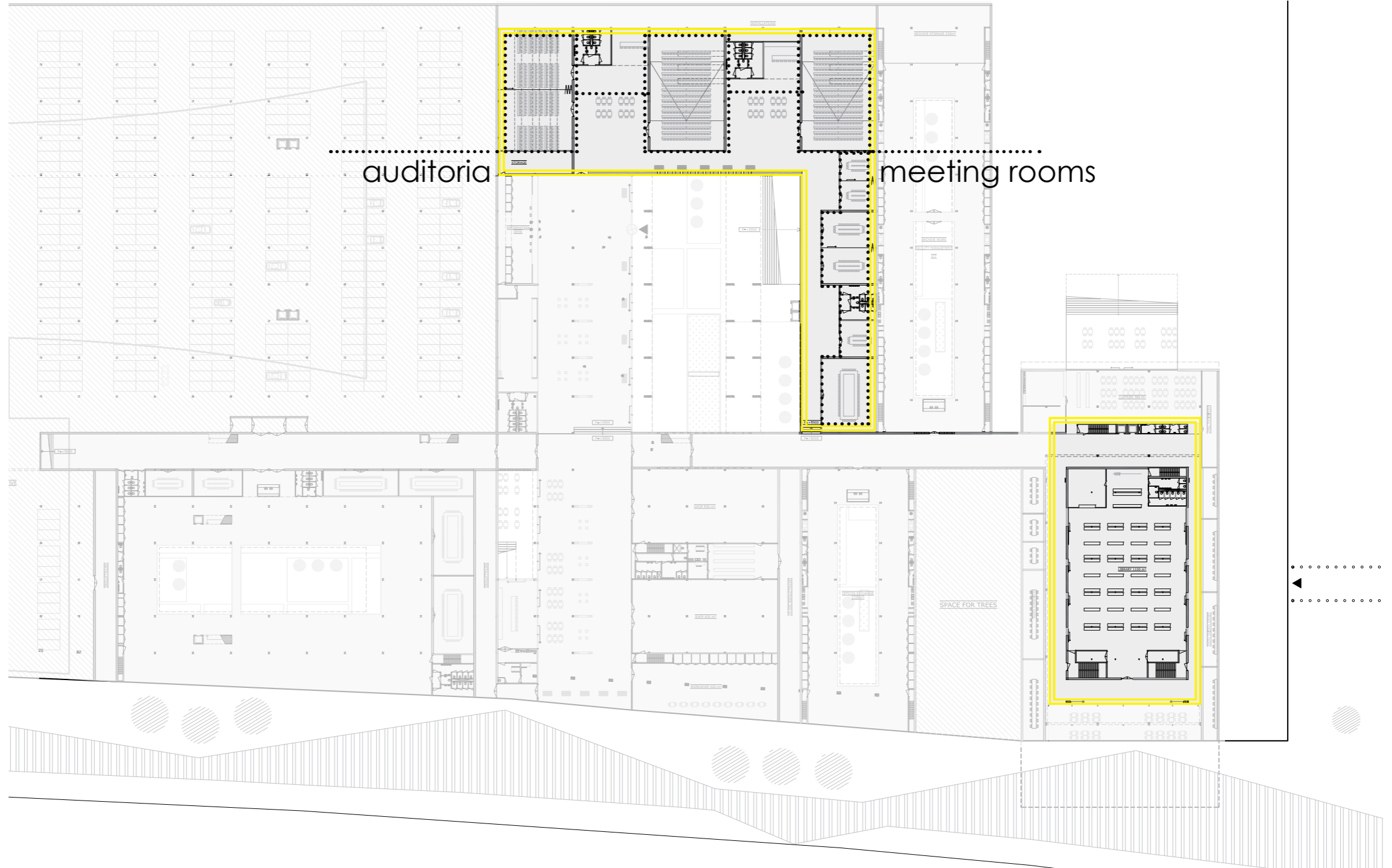
floorplan -1



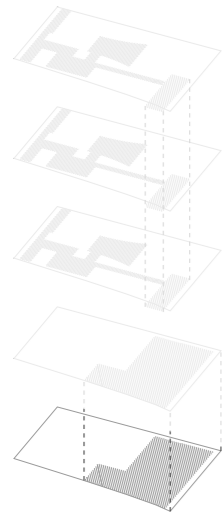
representative zone



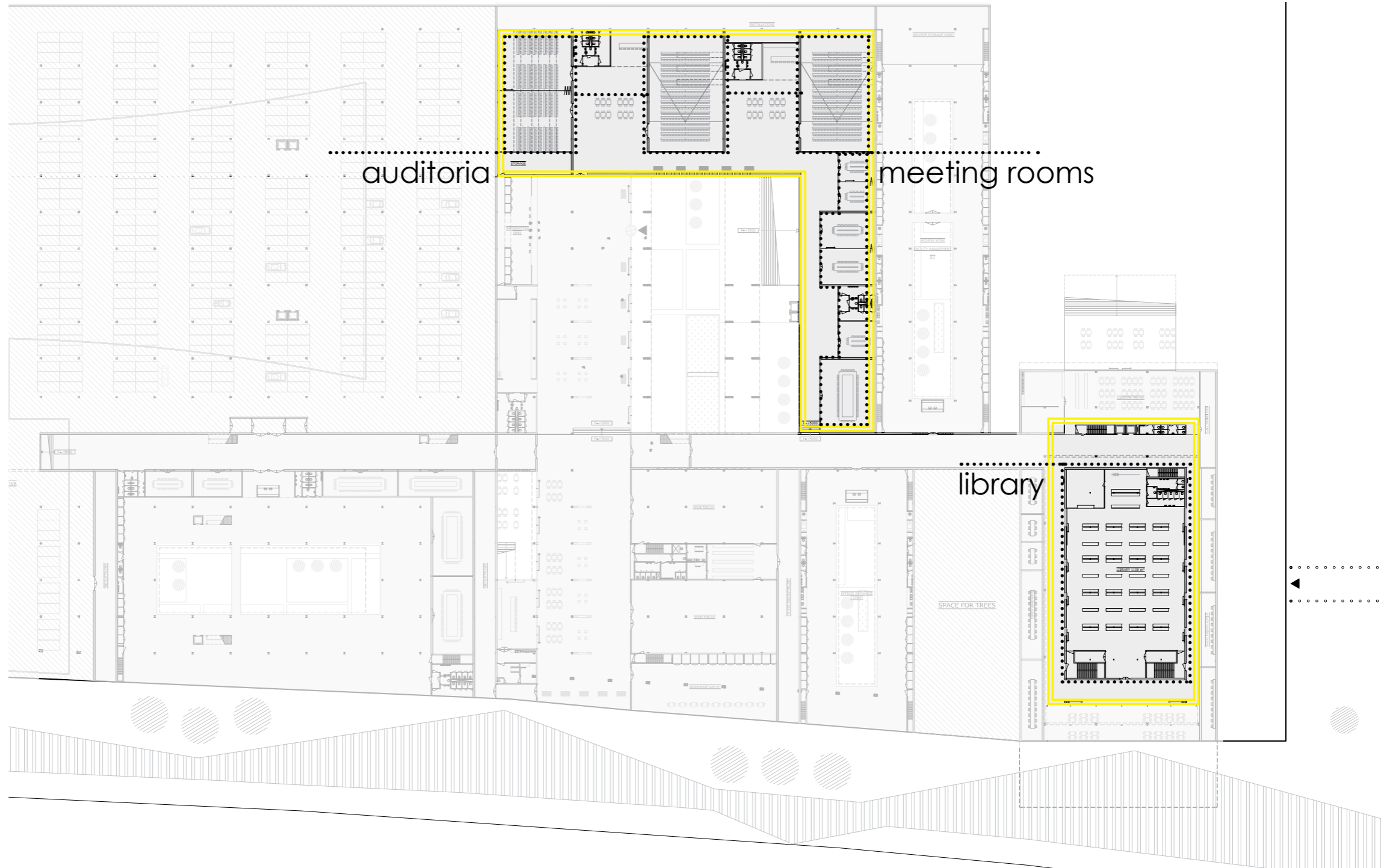
floorplan -1



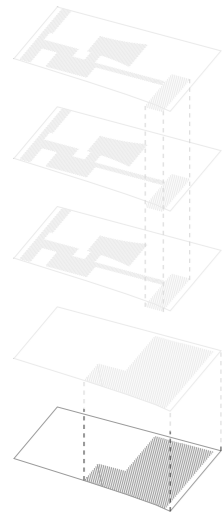
representative zone



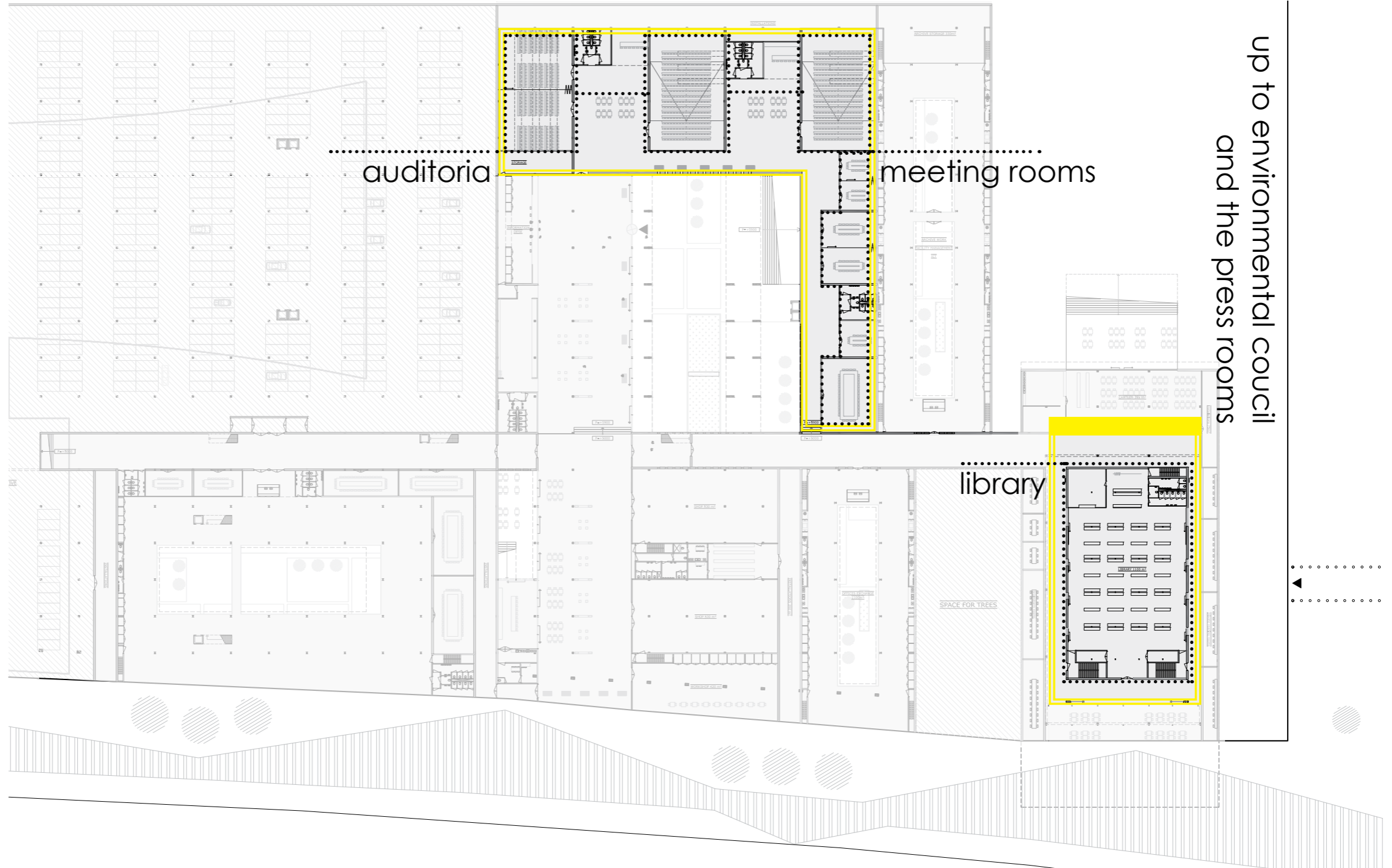
floorplan -1



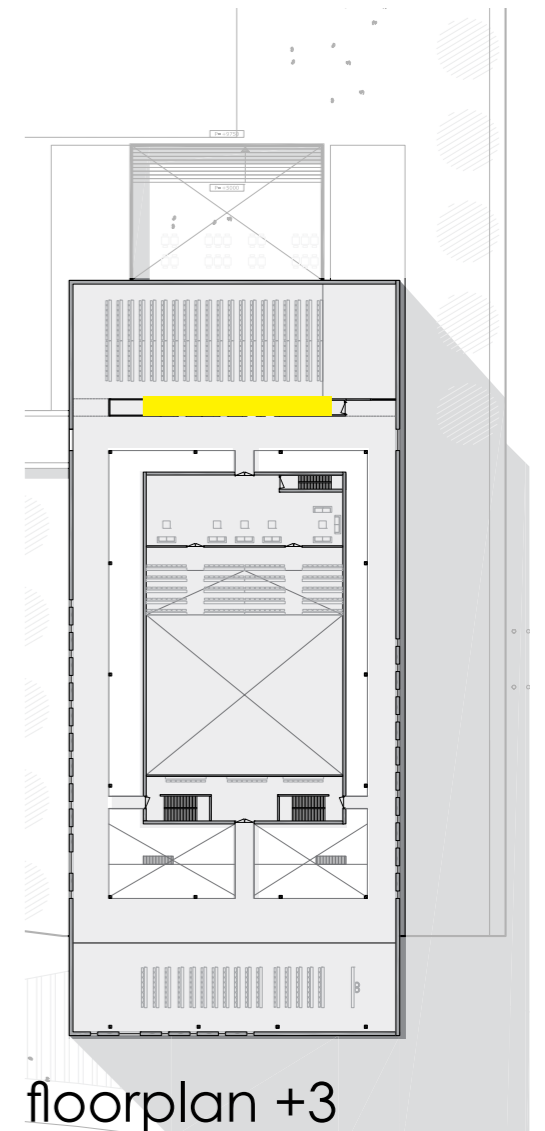
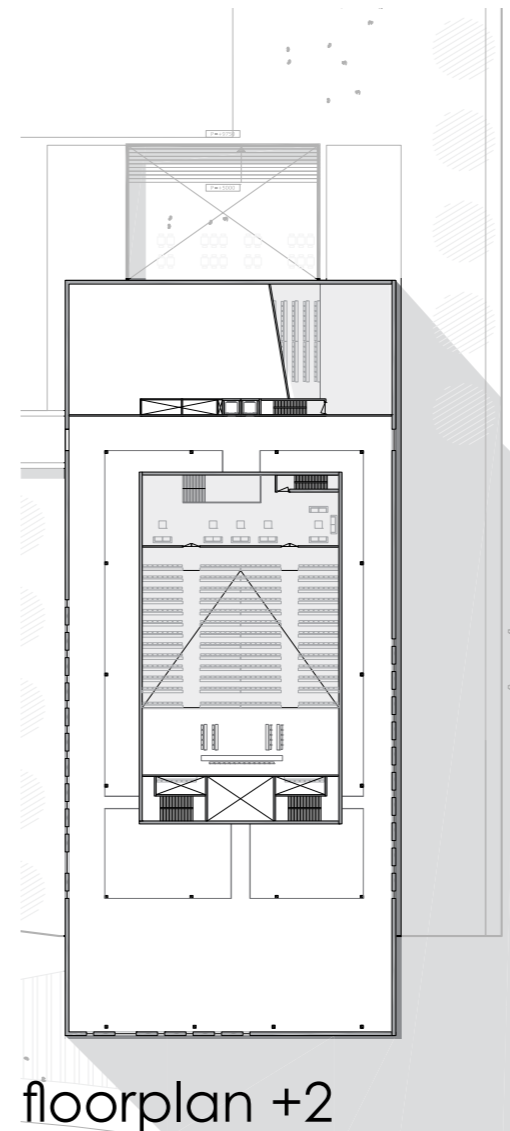
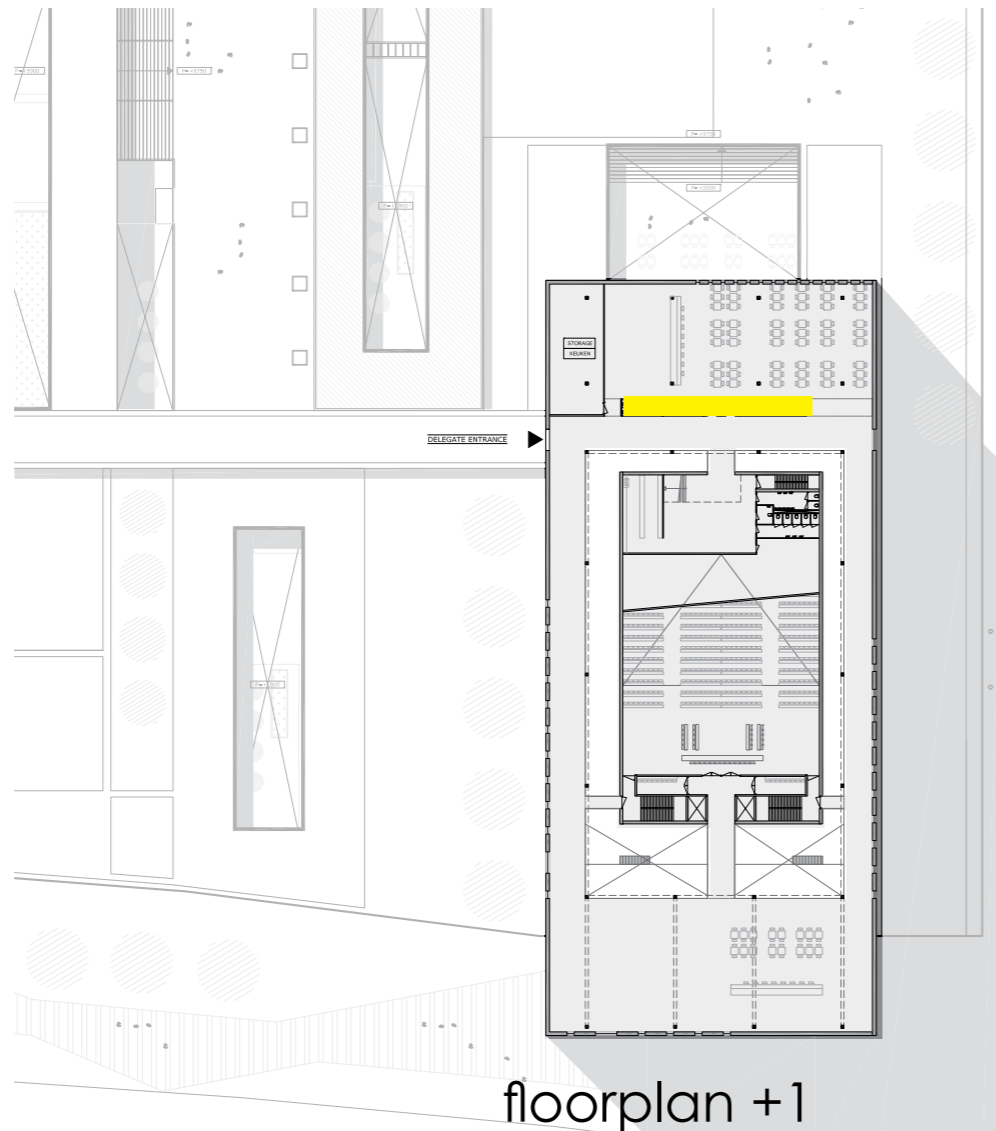
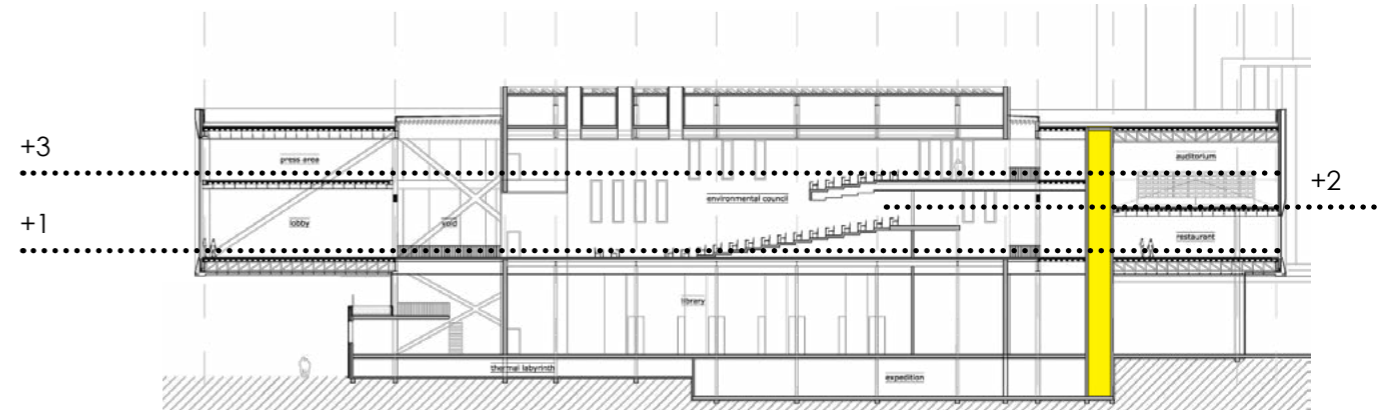
representative zone



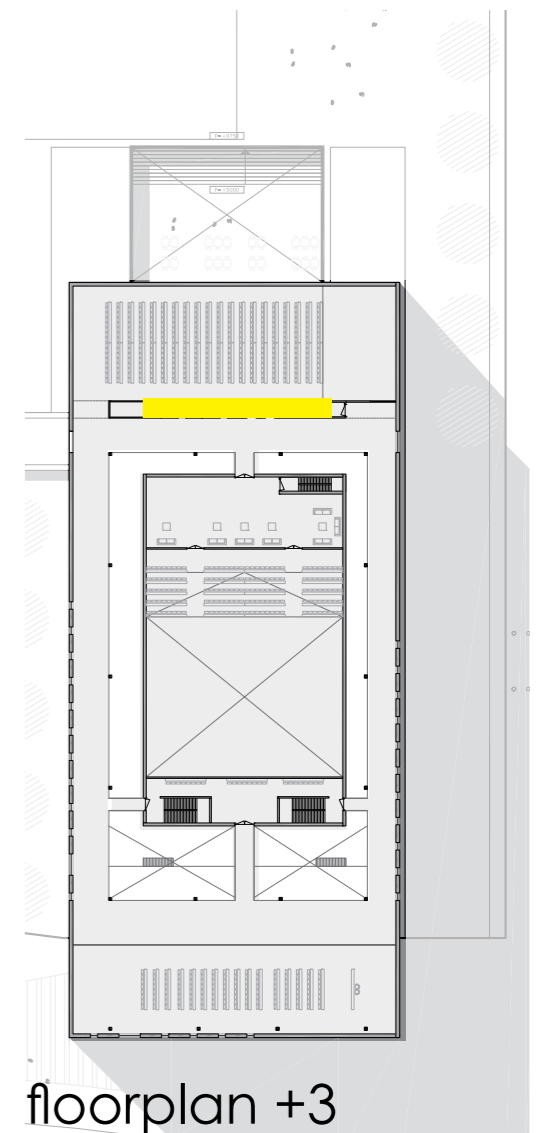
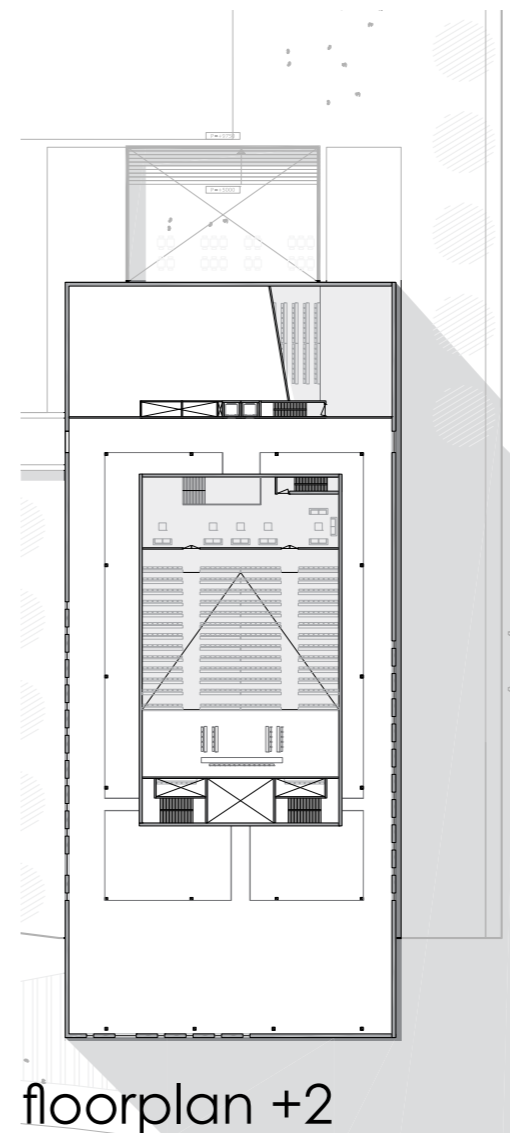
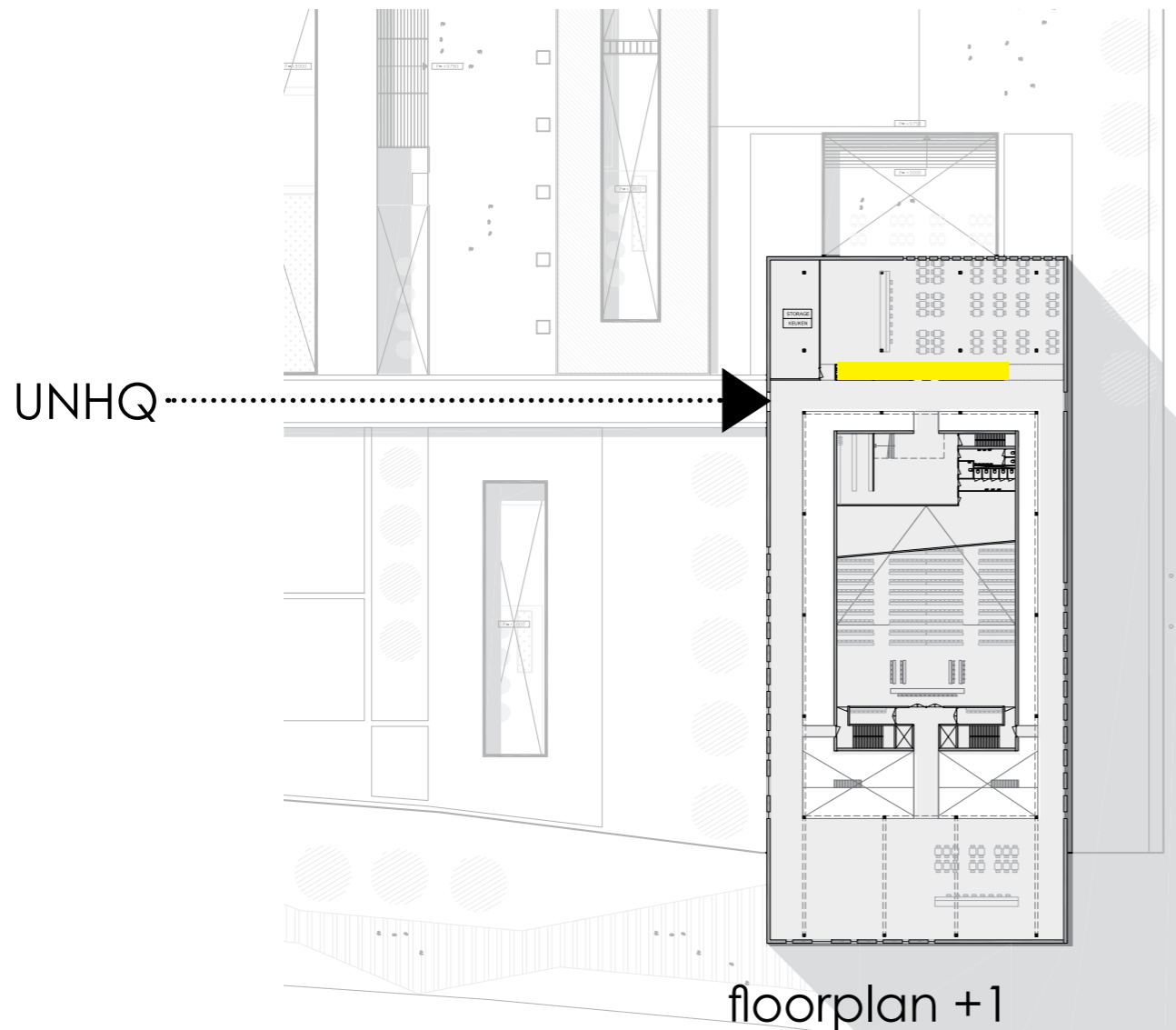
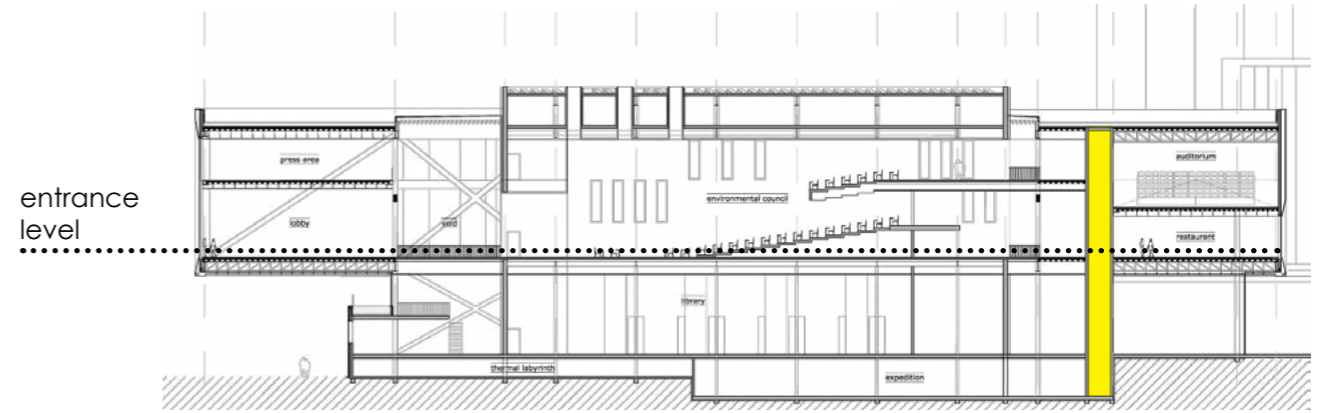
floorplan -1



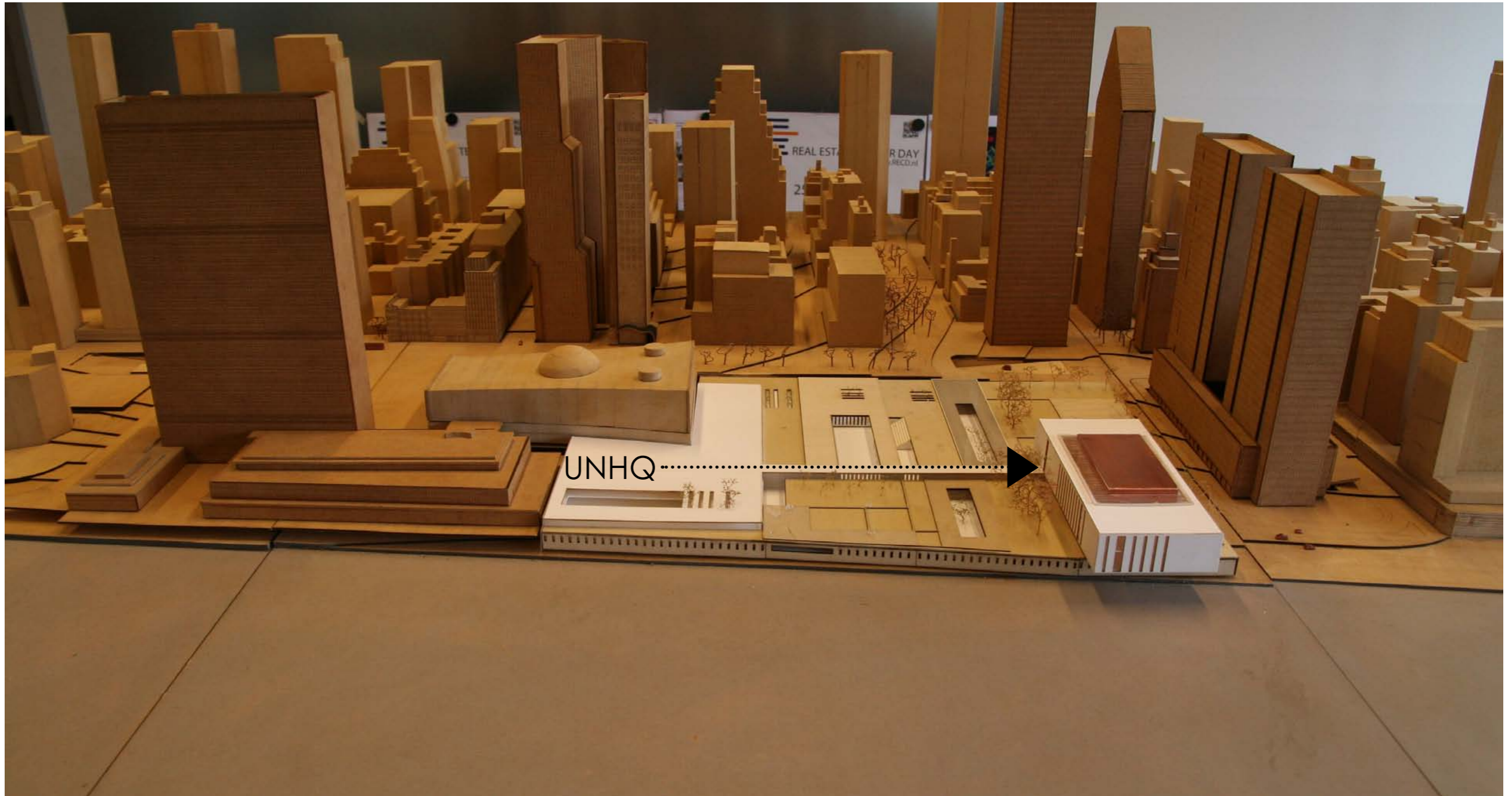
representative zone



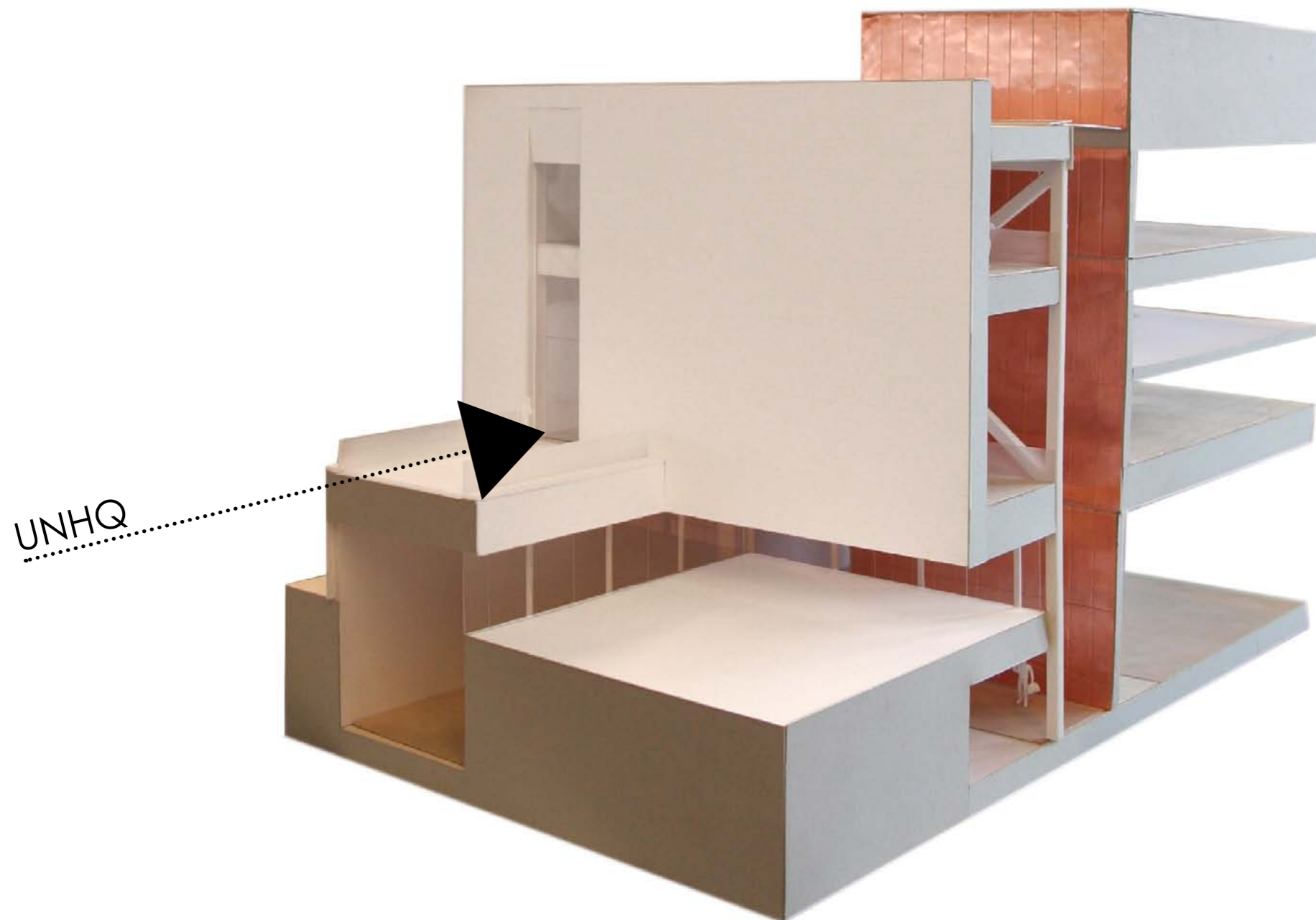
representative zone



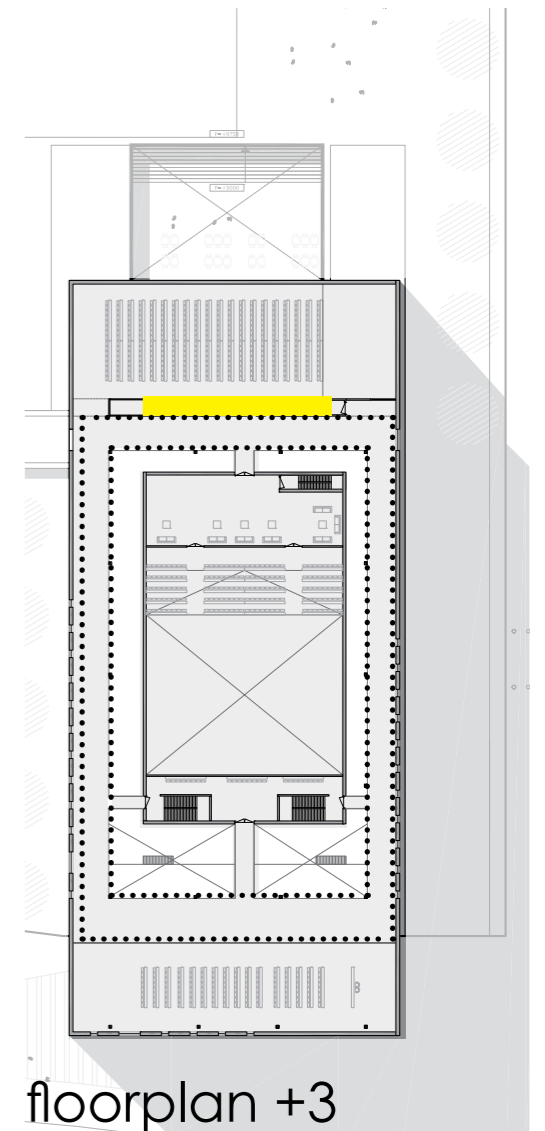
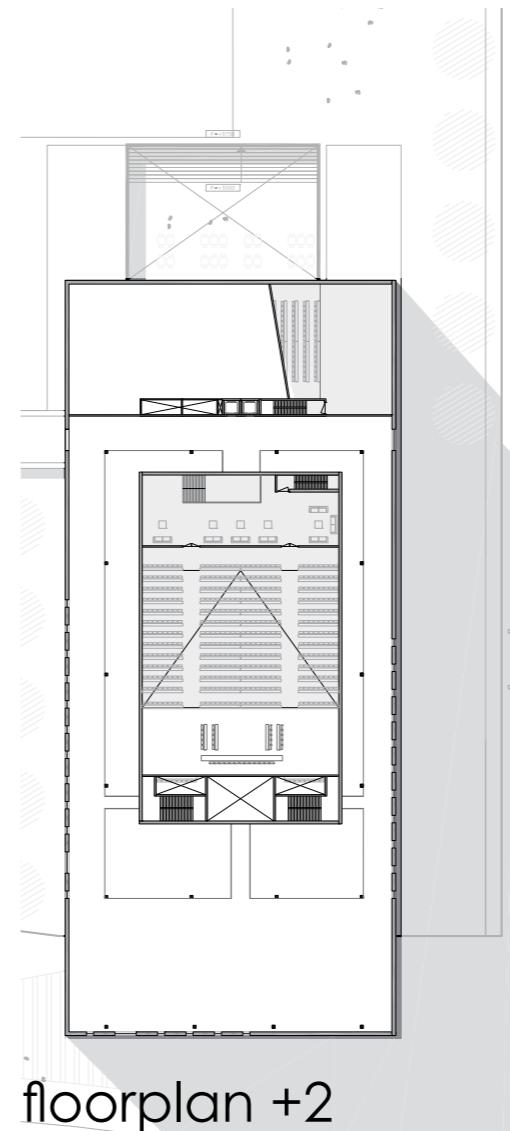
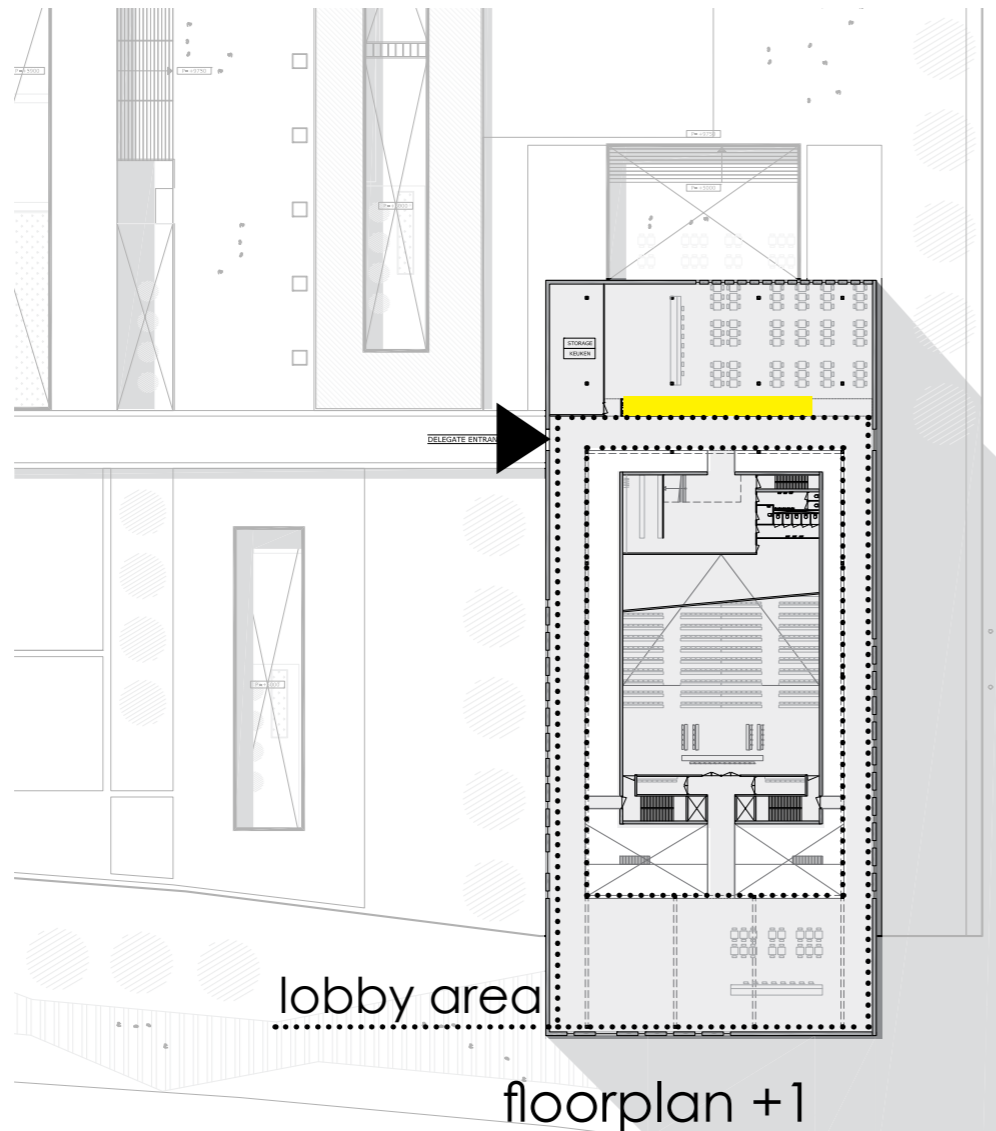
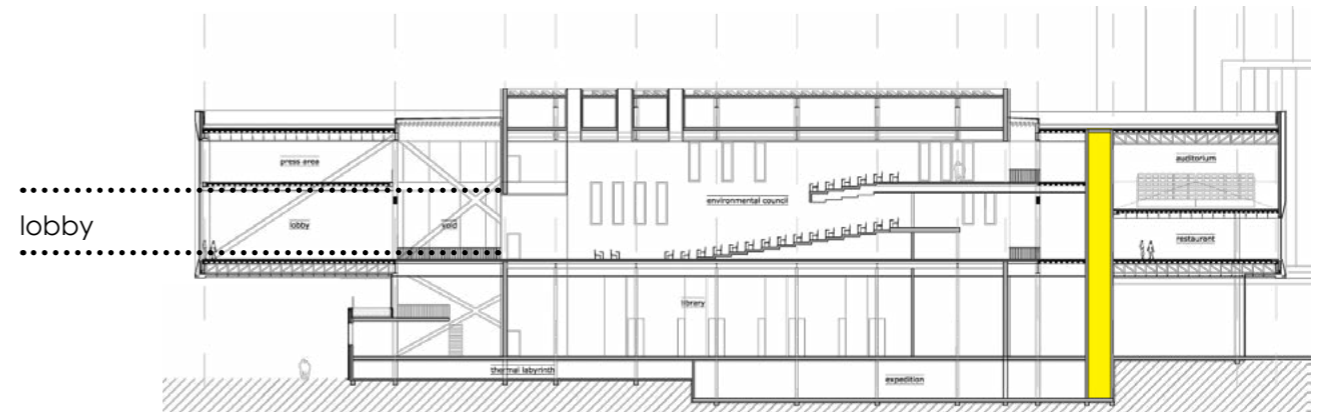
model



model



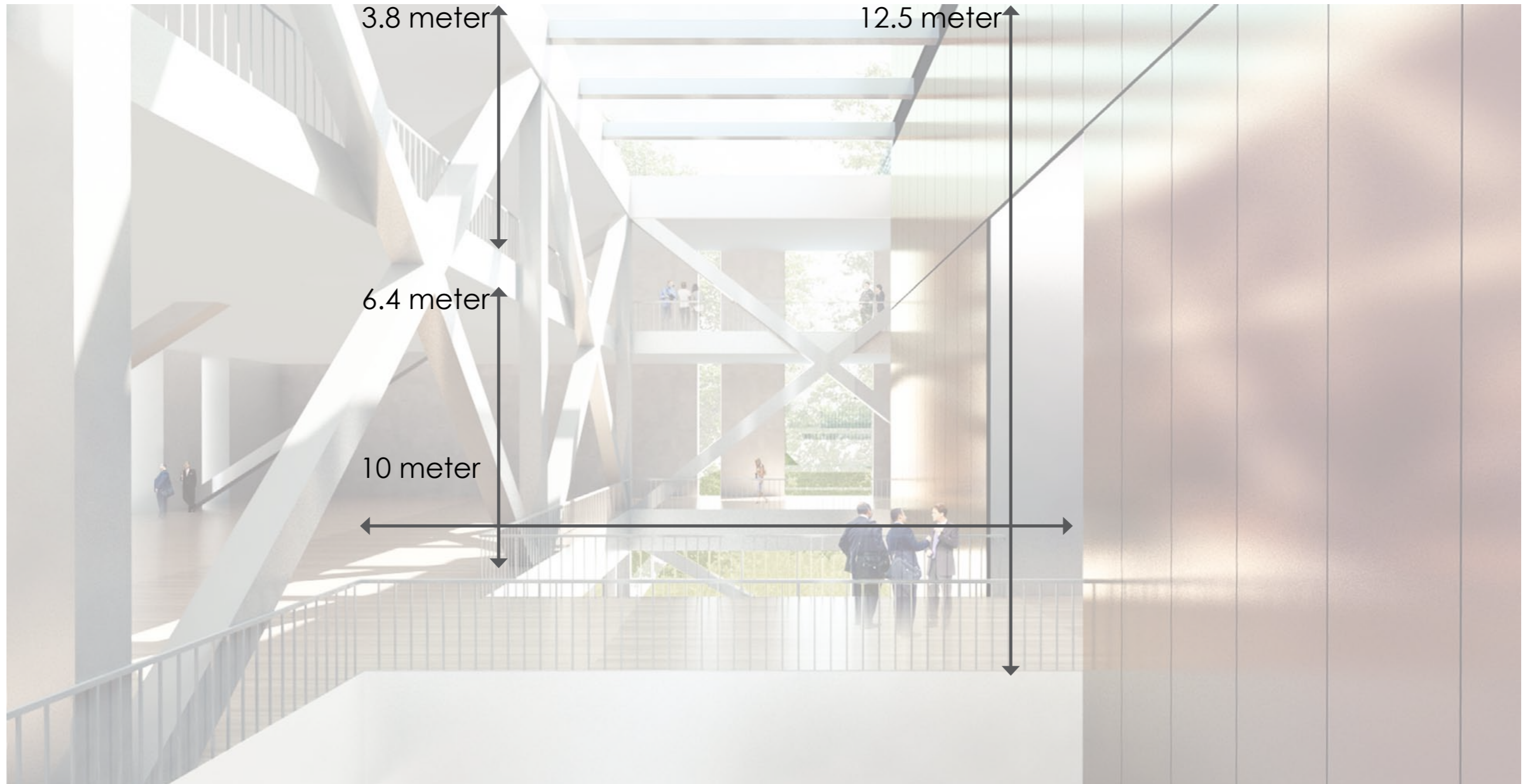
representative zone



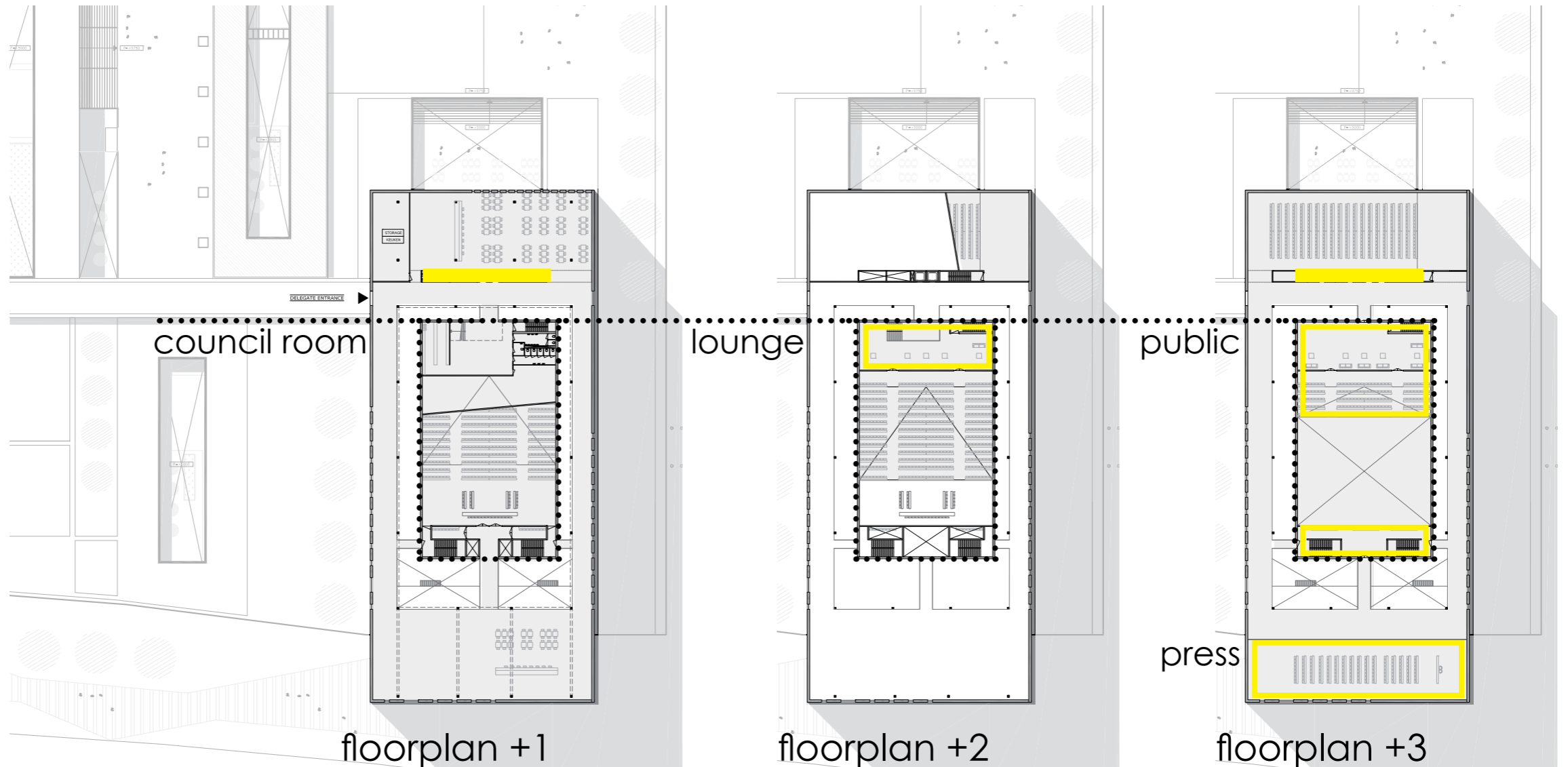
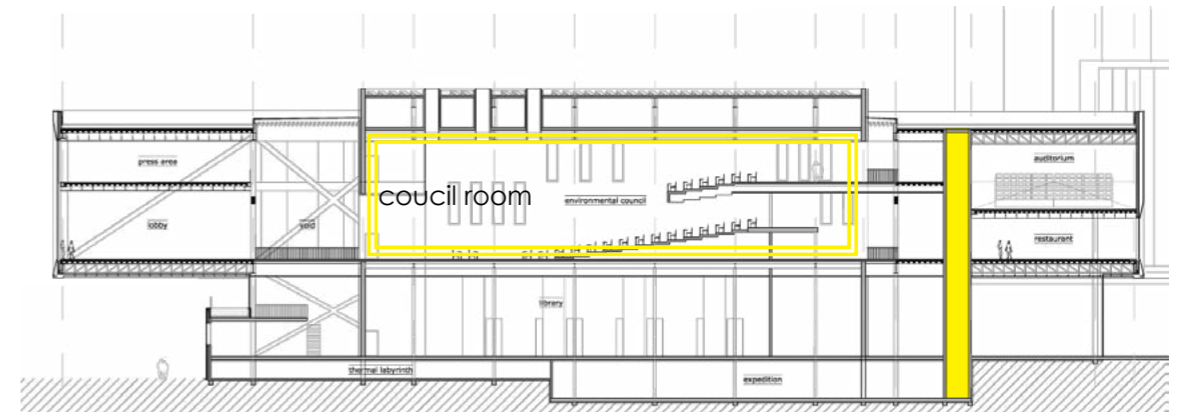
interior view lobby area



interior view lobby area



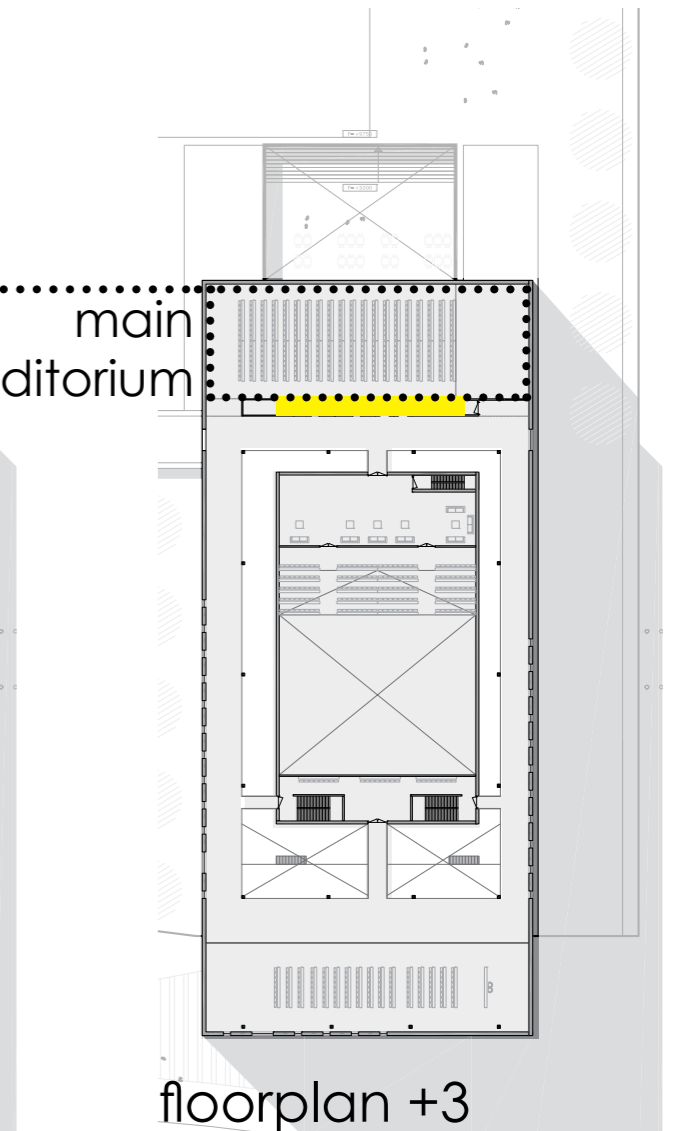
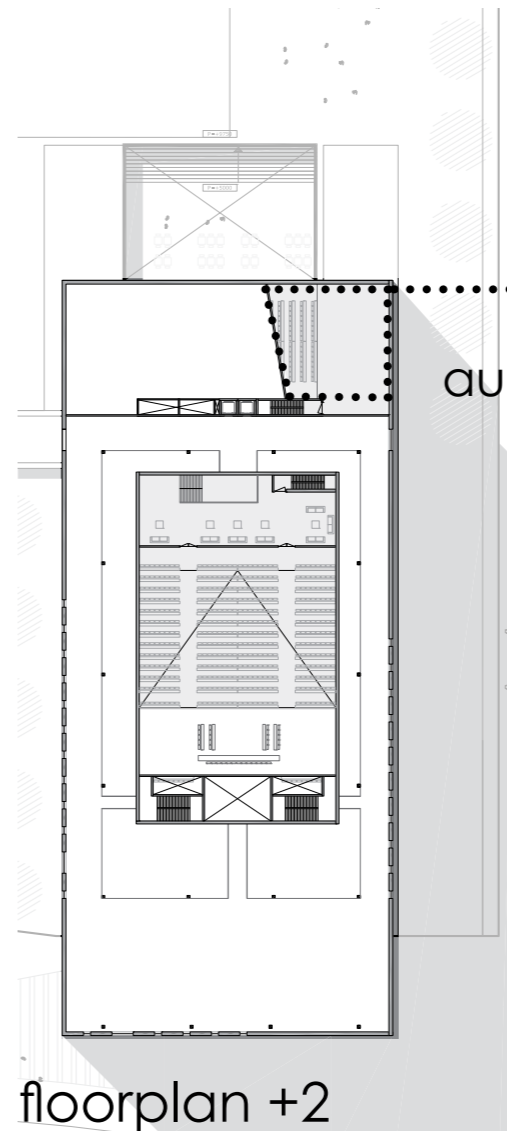
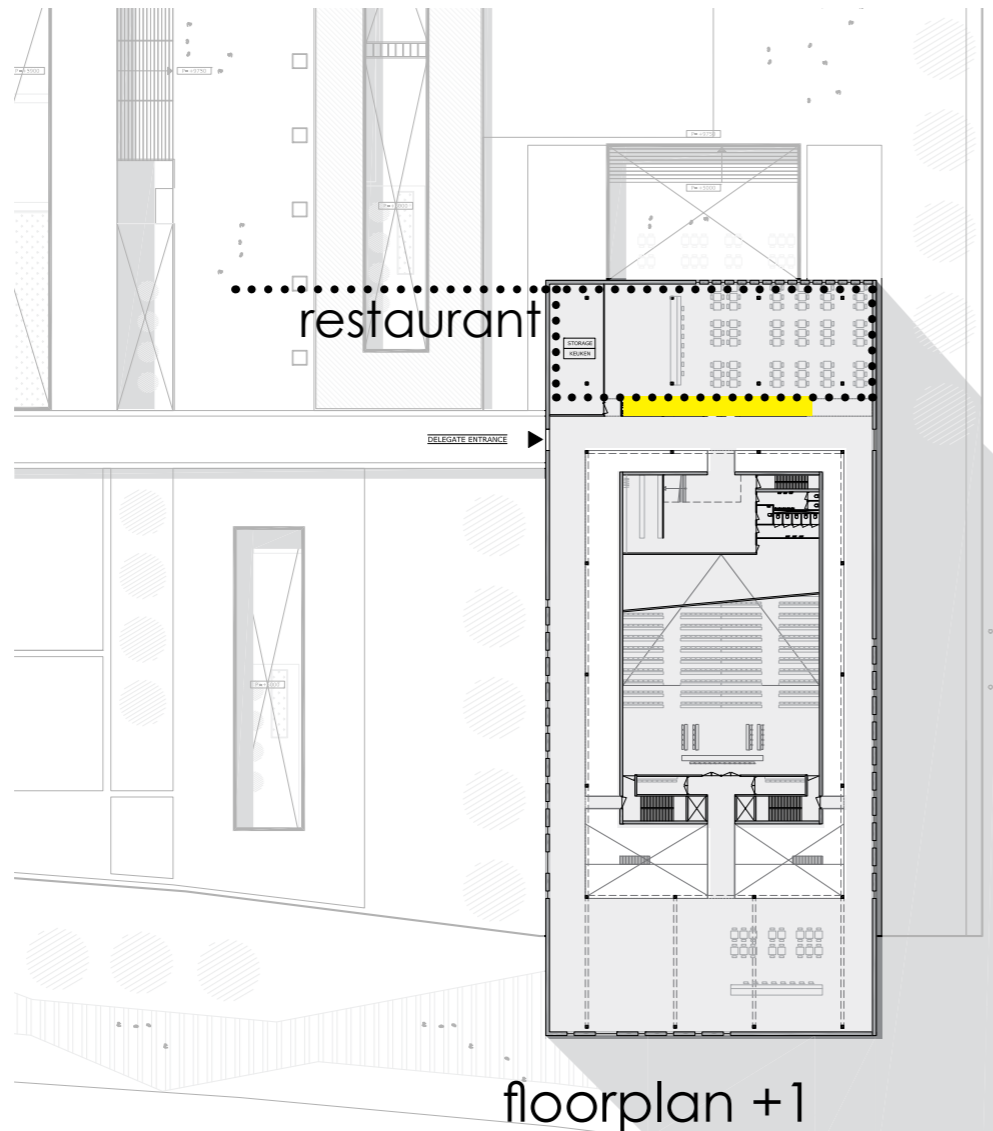
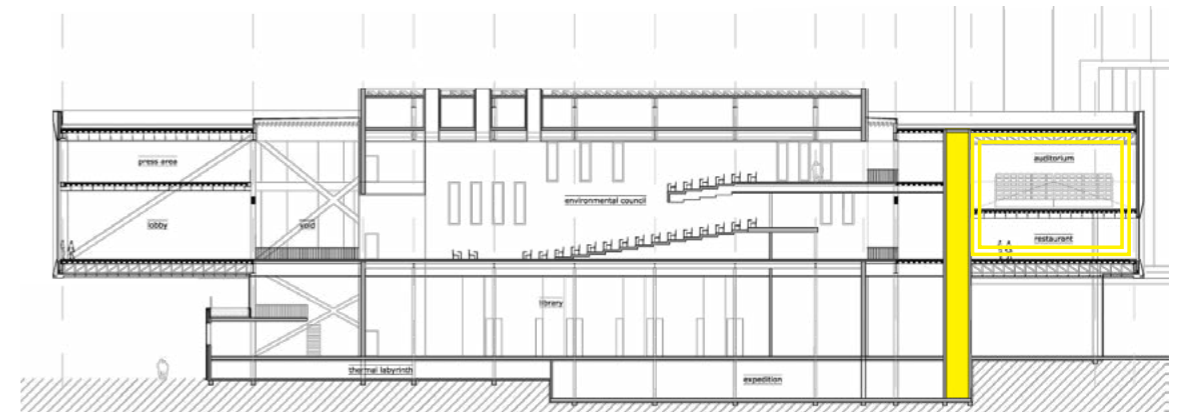
representative zone



council room

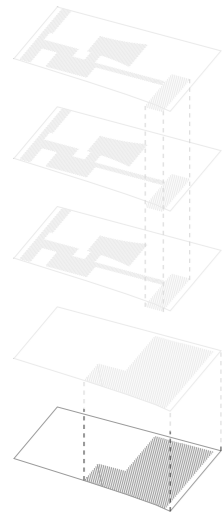


representative zone

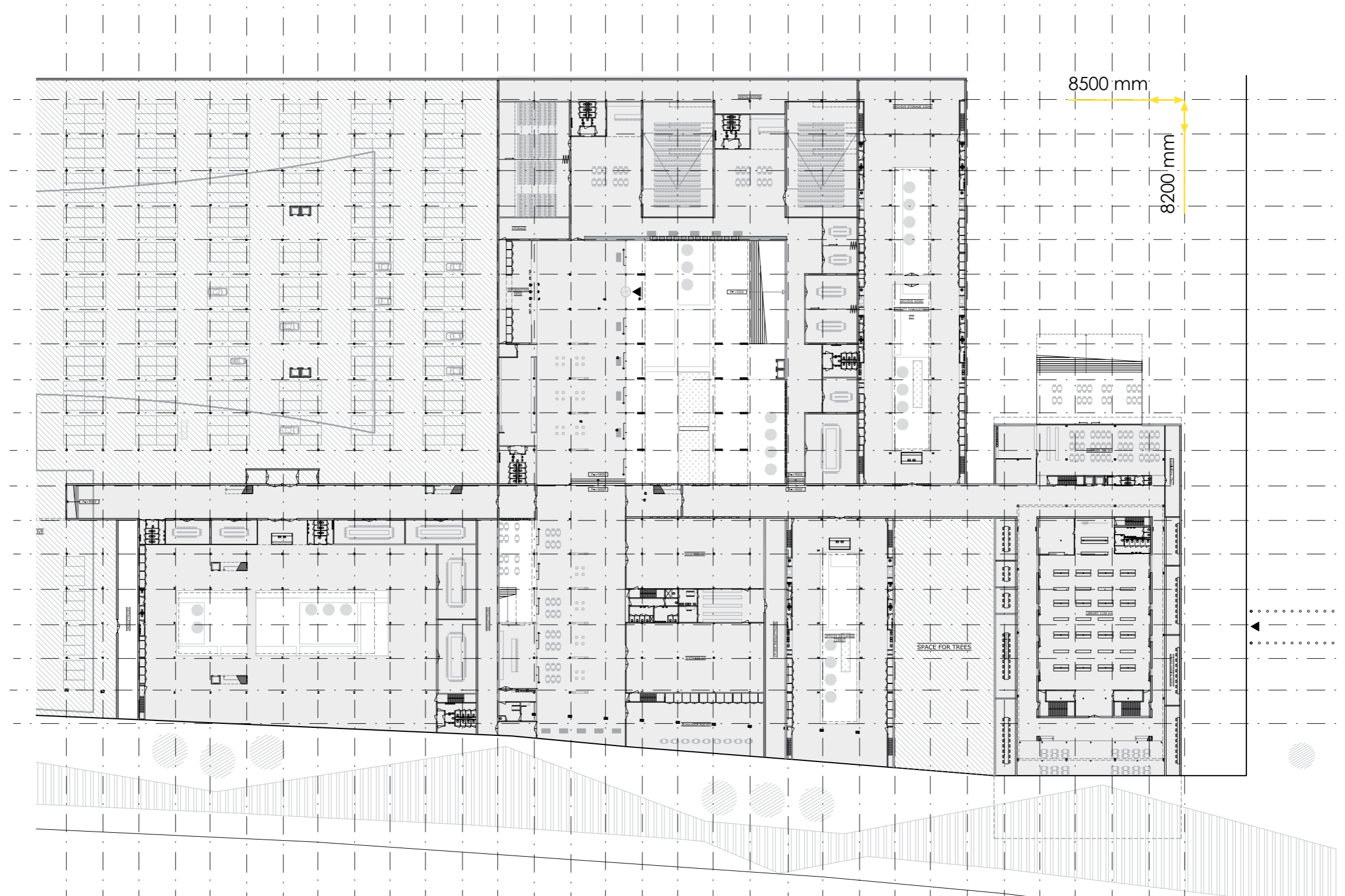


design 4 construction

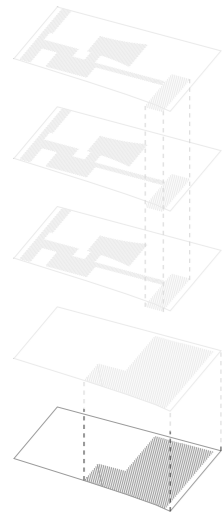
grid build up: continue current grid



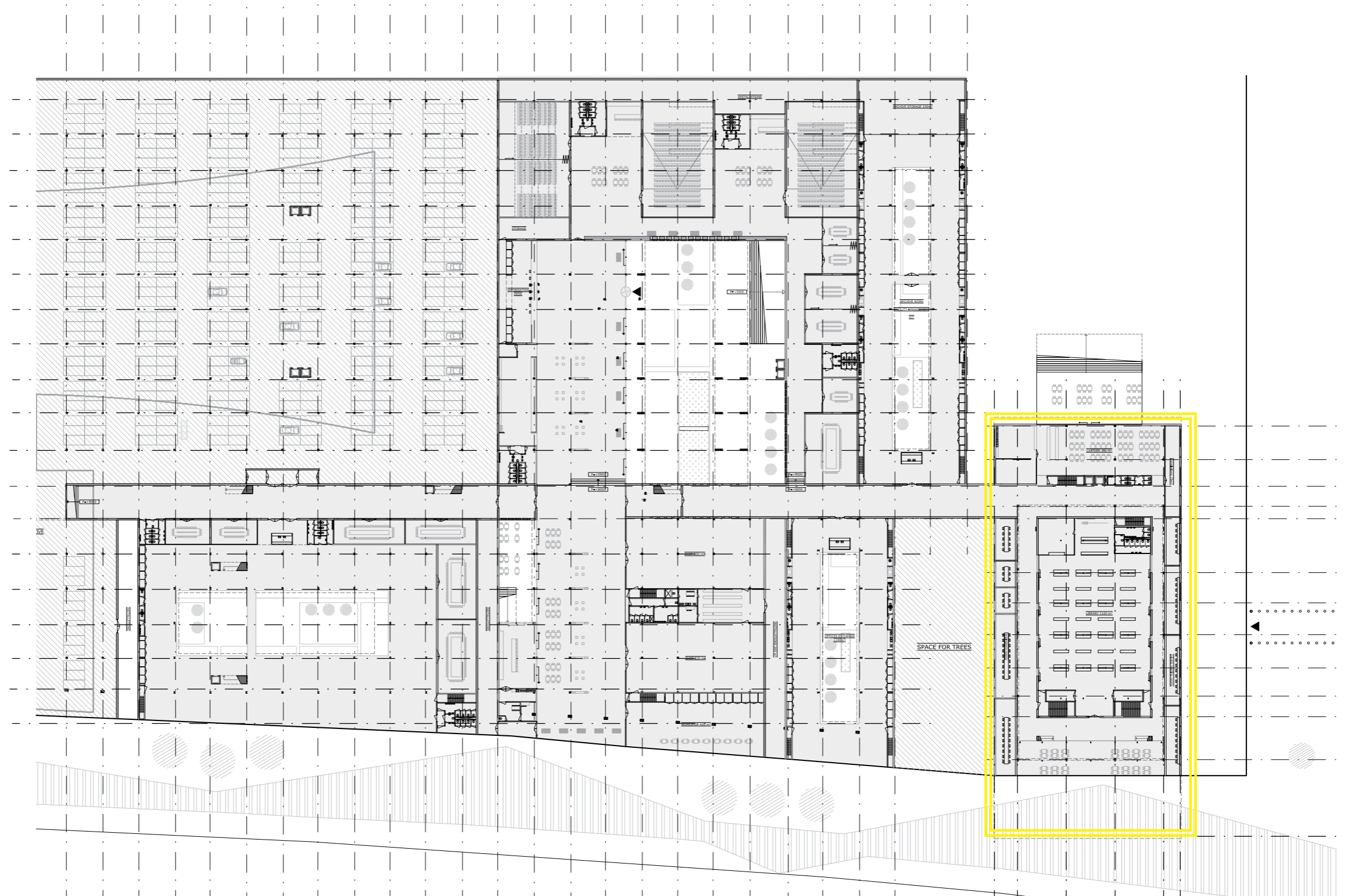
floorplan -1



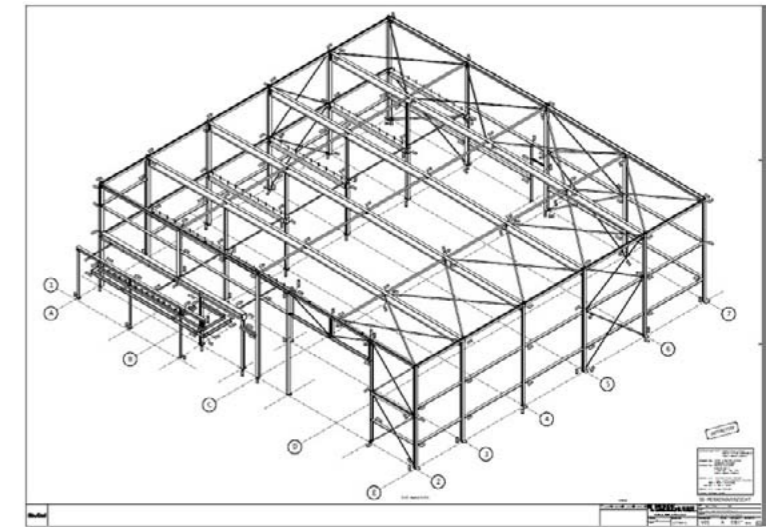
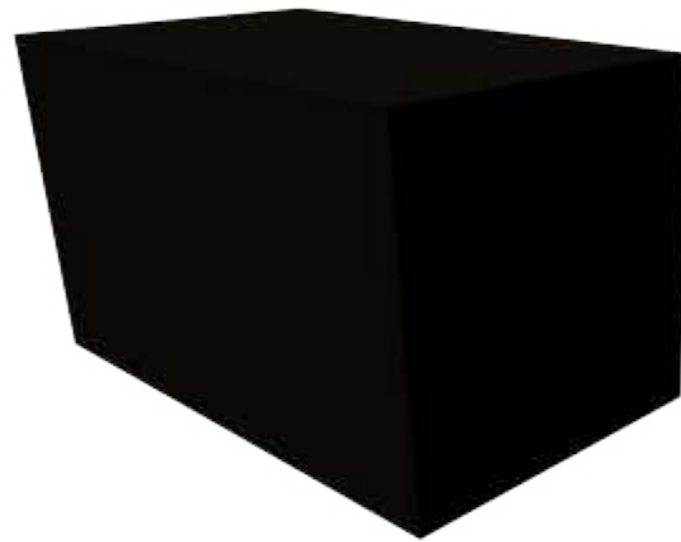
grid build up: exception for canopy



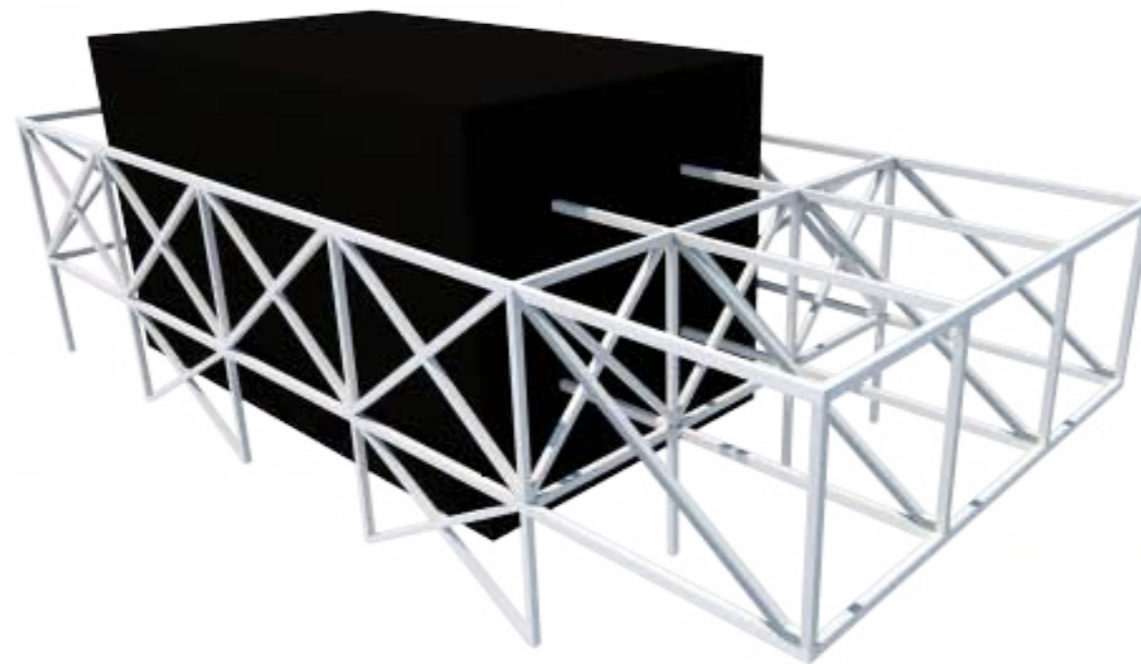
floorplan -1



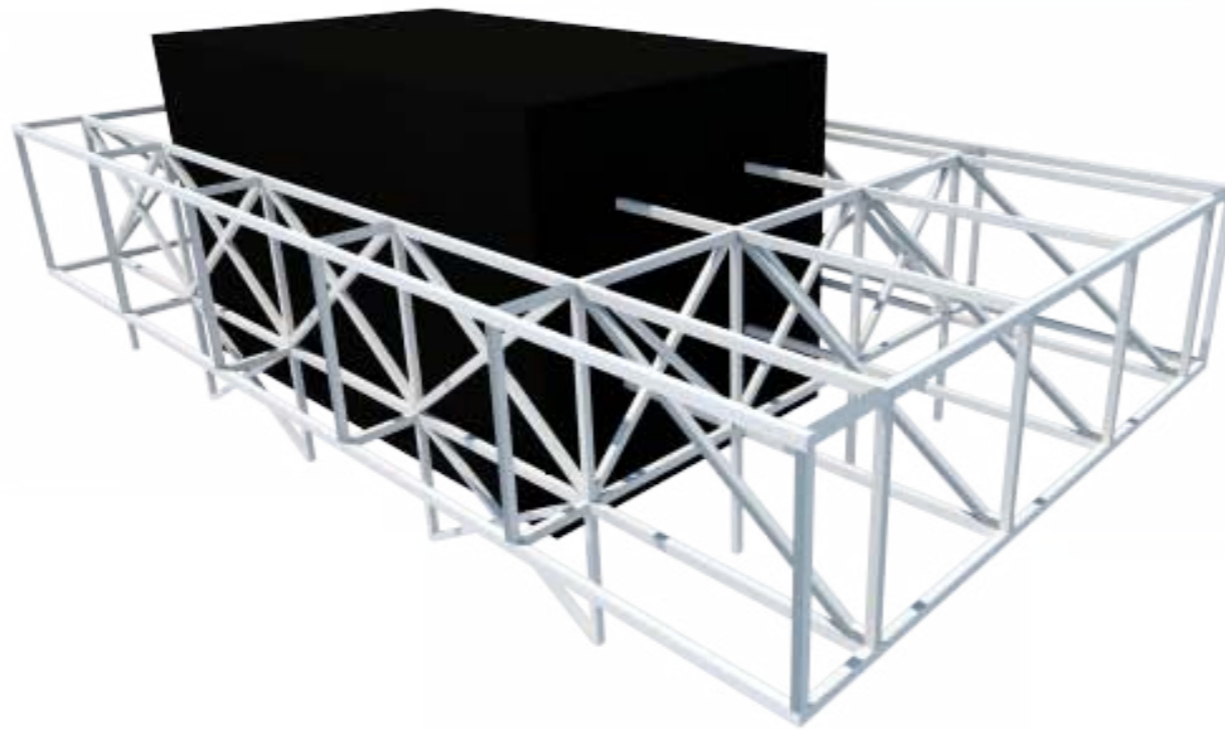
braced steel construction



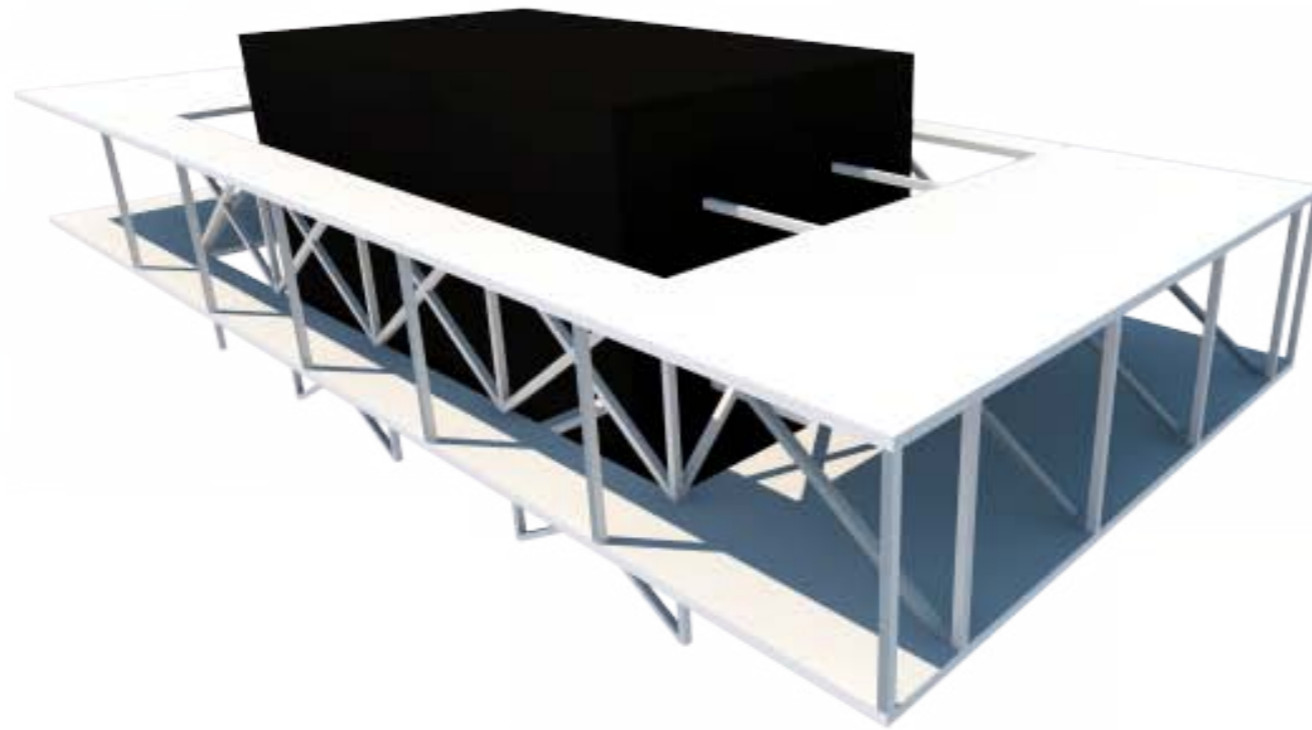
steel framework for canopy



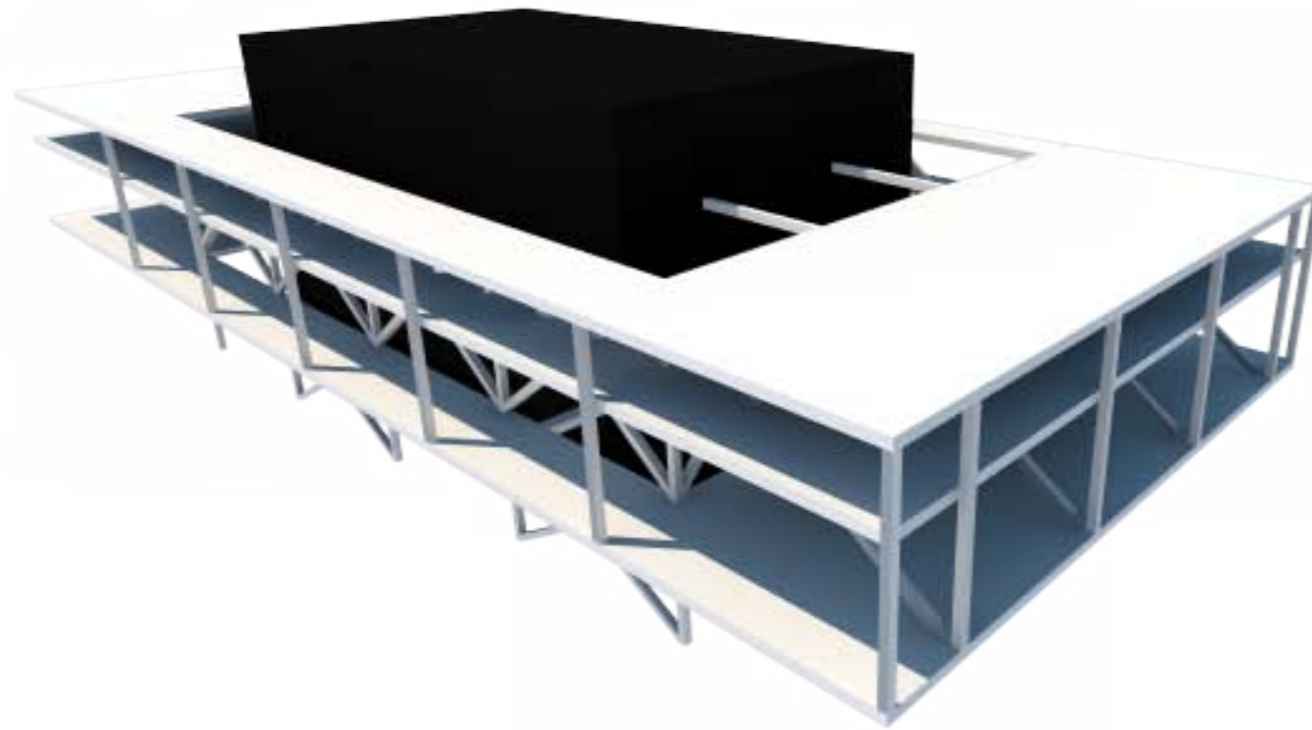
stiff steel frameworks for side canopies



bracing concrete floors



shorter buckling length

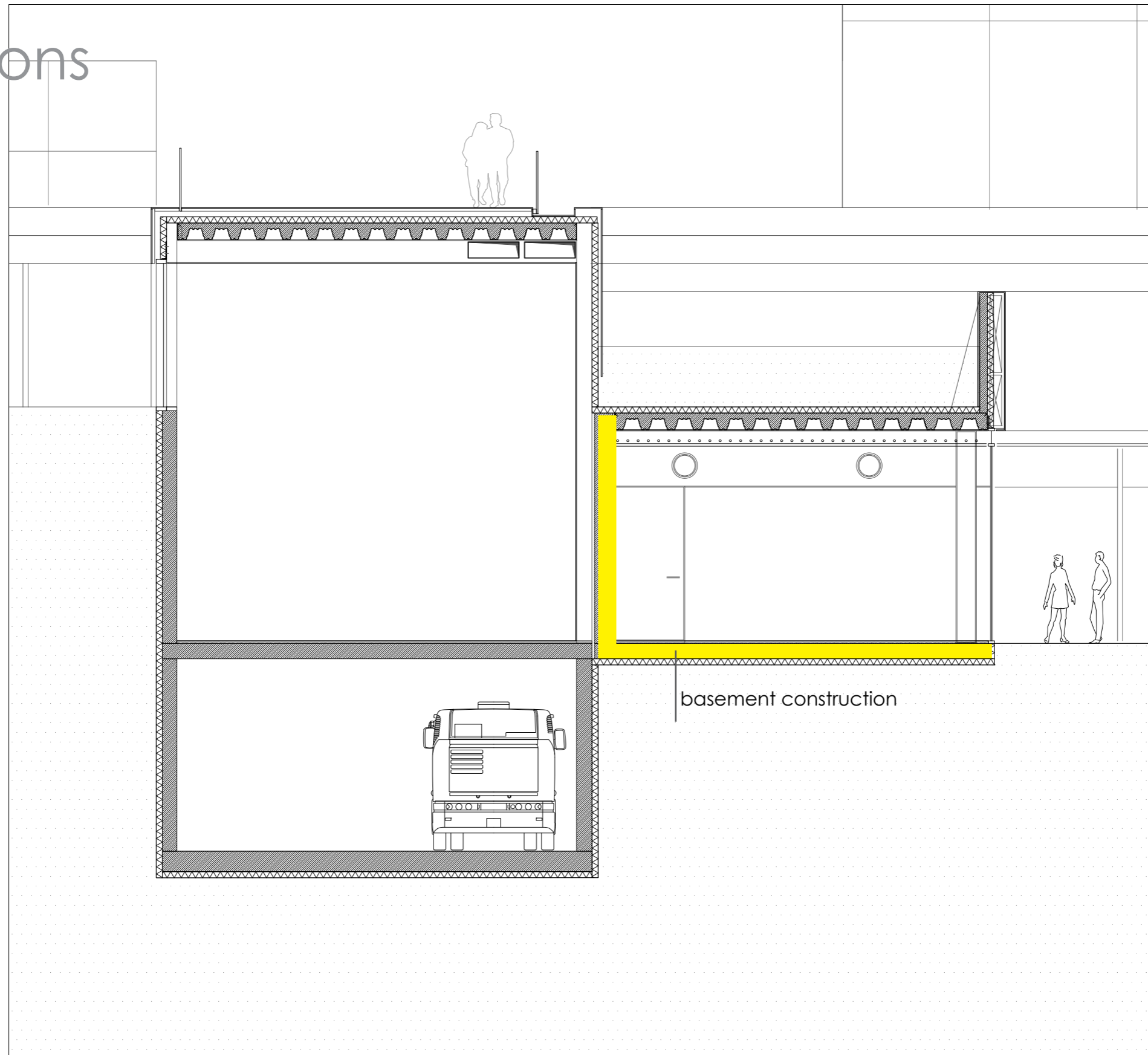


grid build up: exception for future extensions



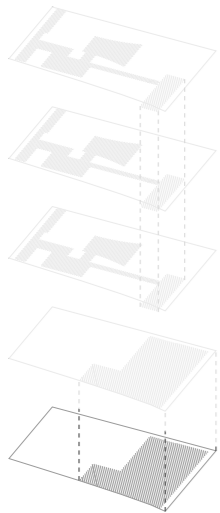
floorplan -1

dilatations



design installations

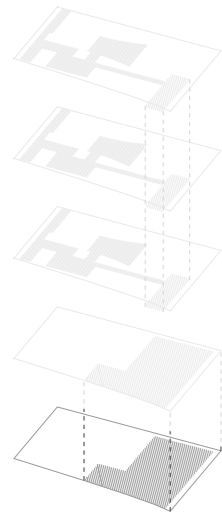
installation spaces



floorplan -1



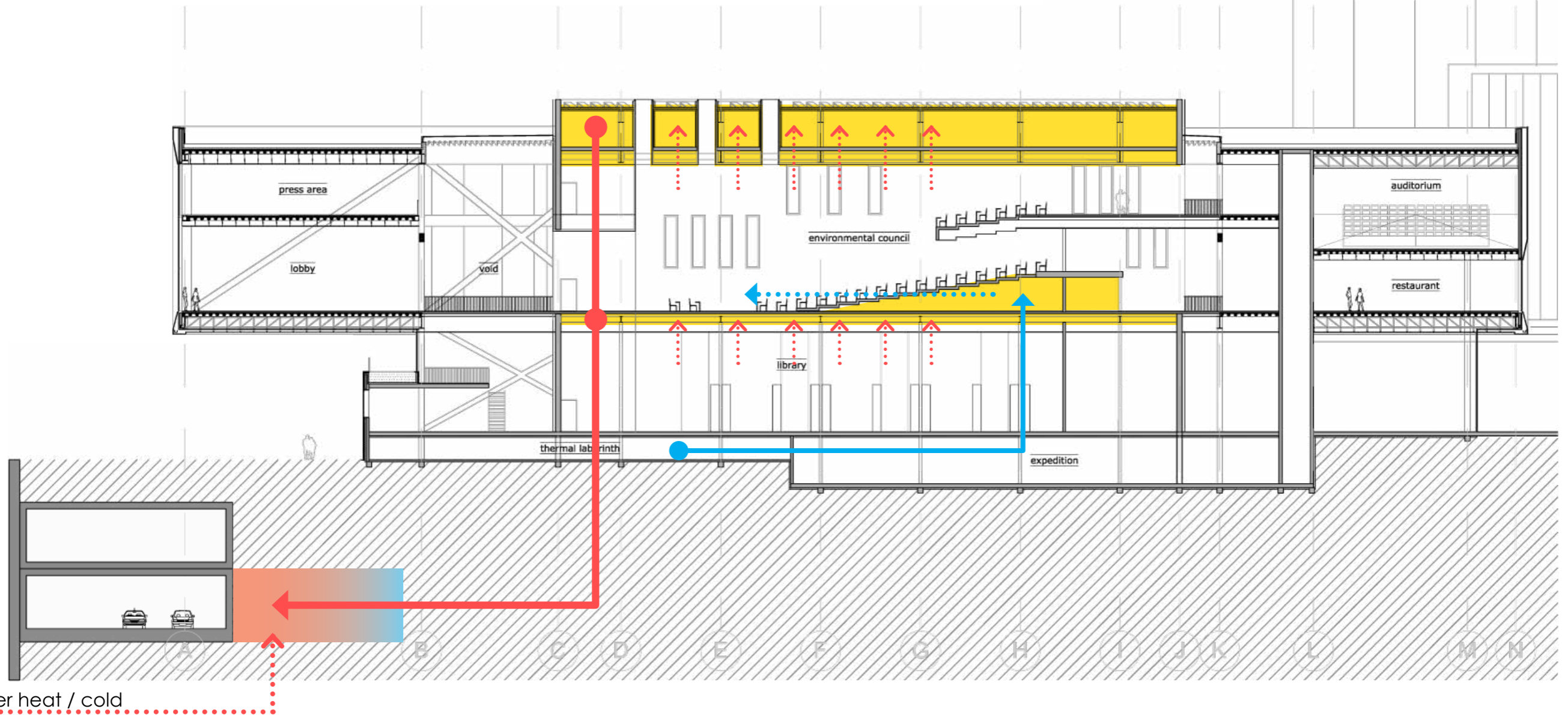
all air zones



floorplan -1

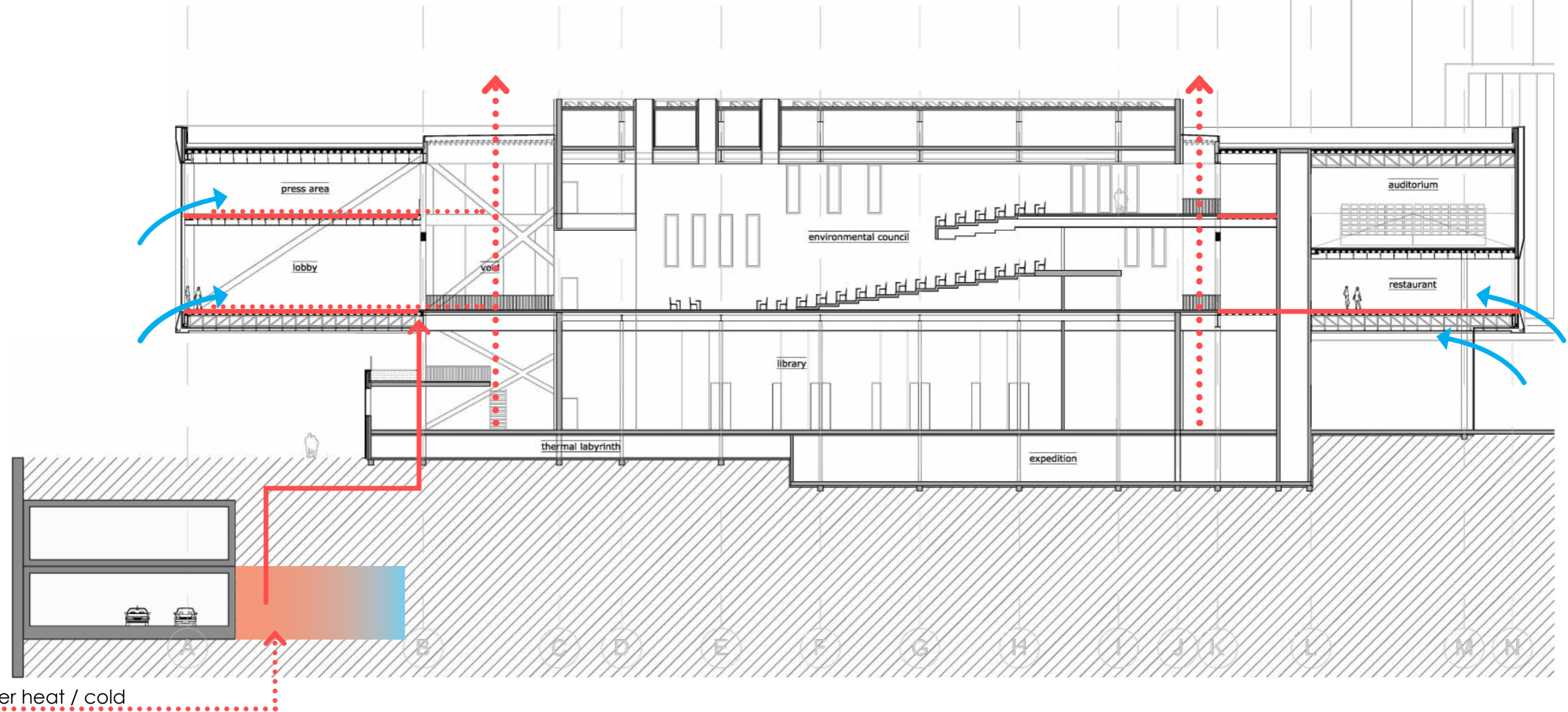


all air system for council room with heat retention



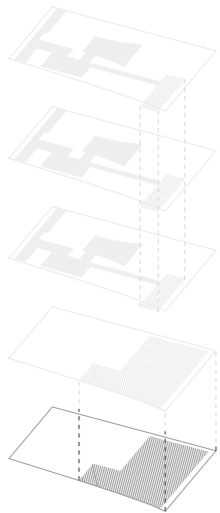
river heat / cold

natural ventilation for lobby



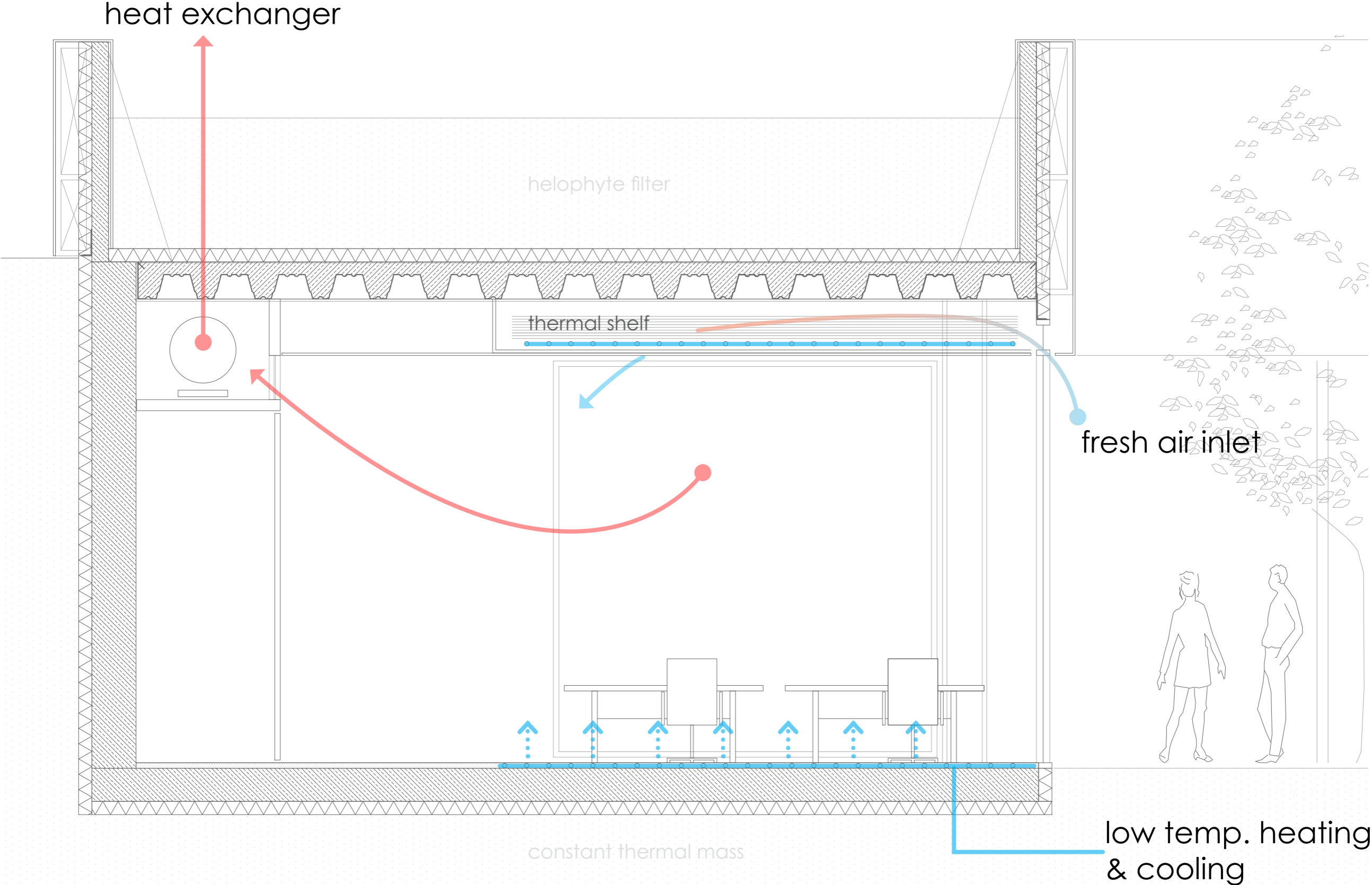
river heat / cold

hybrid zones



floorplan -1



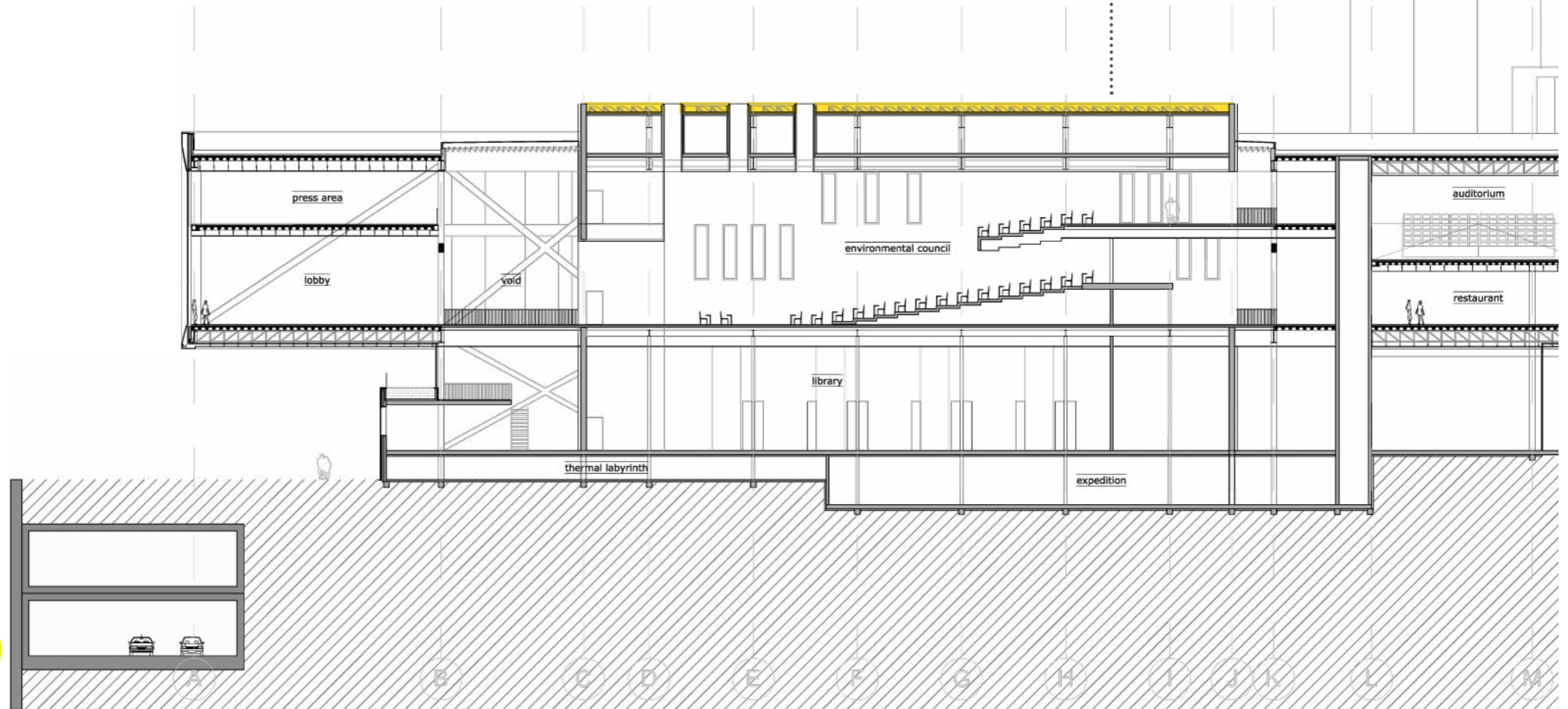




energy

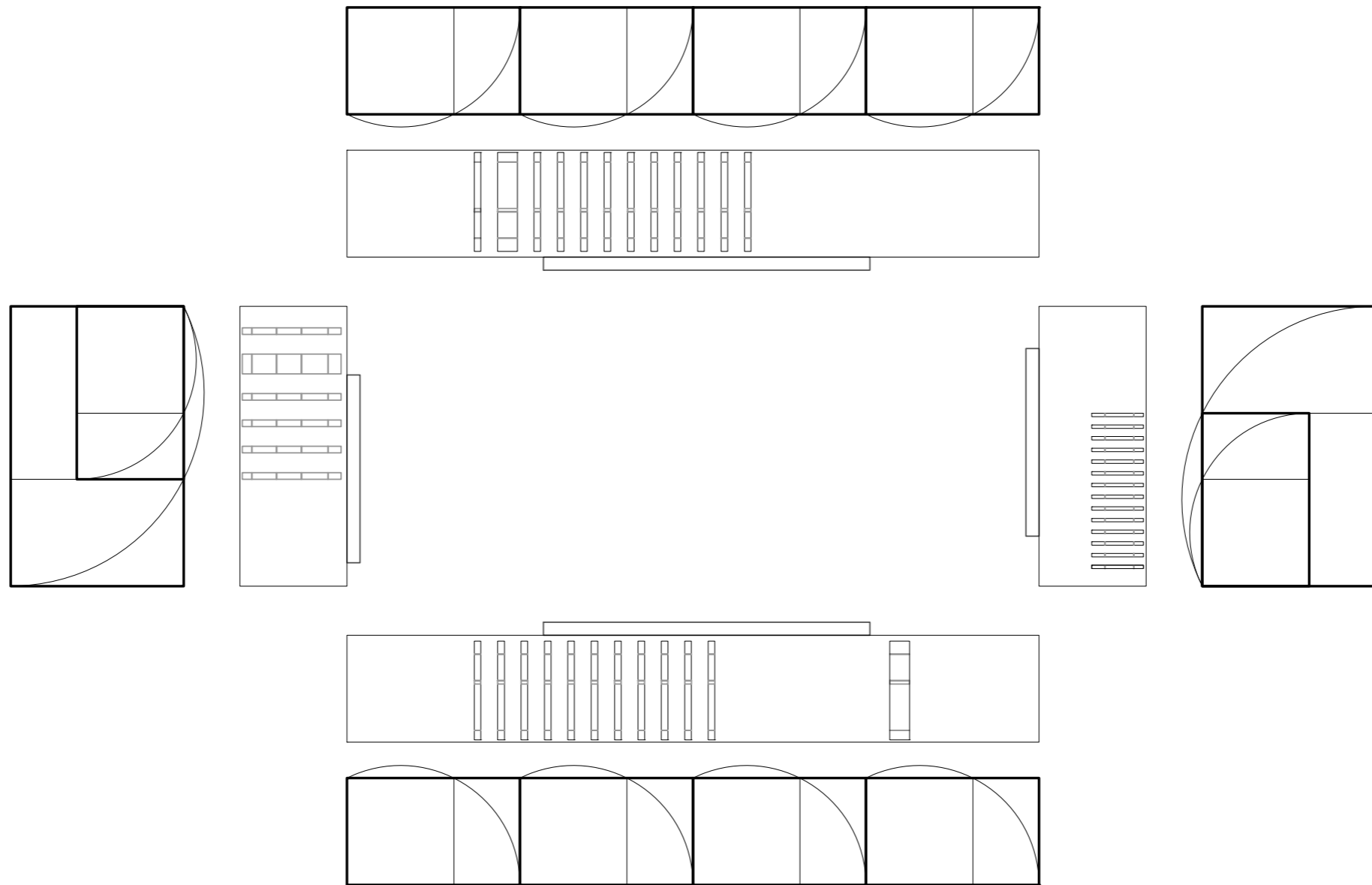
1100 m² PV cells (210 MWh)

water turbine every 25 m (1.5 MWh/turbine)

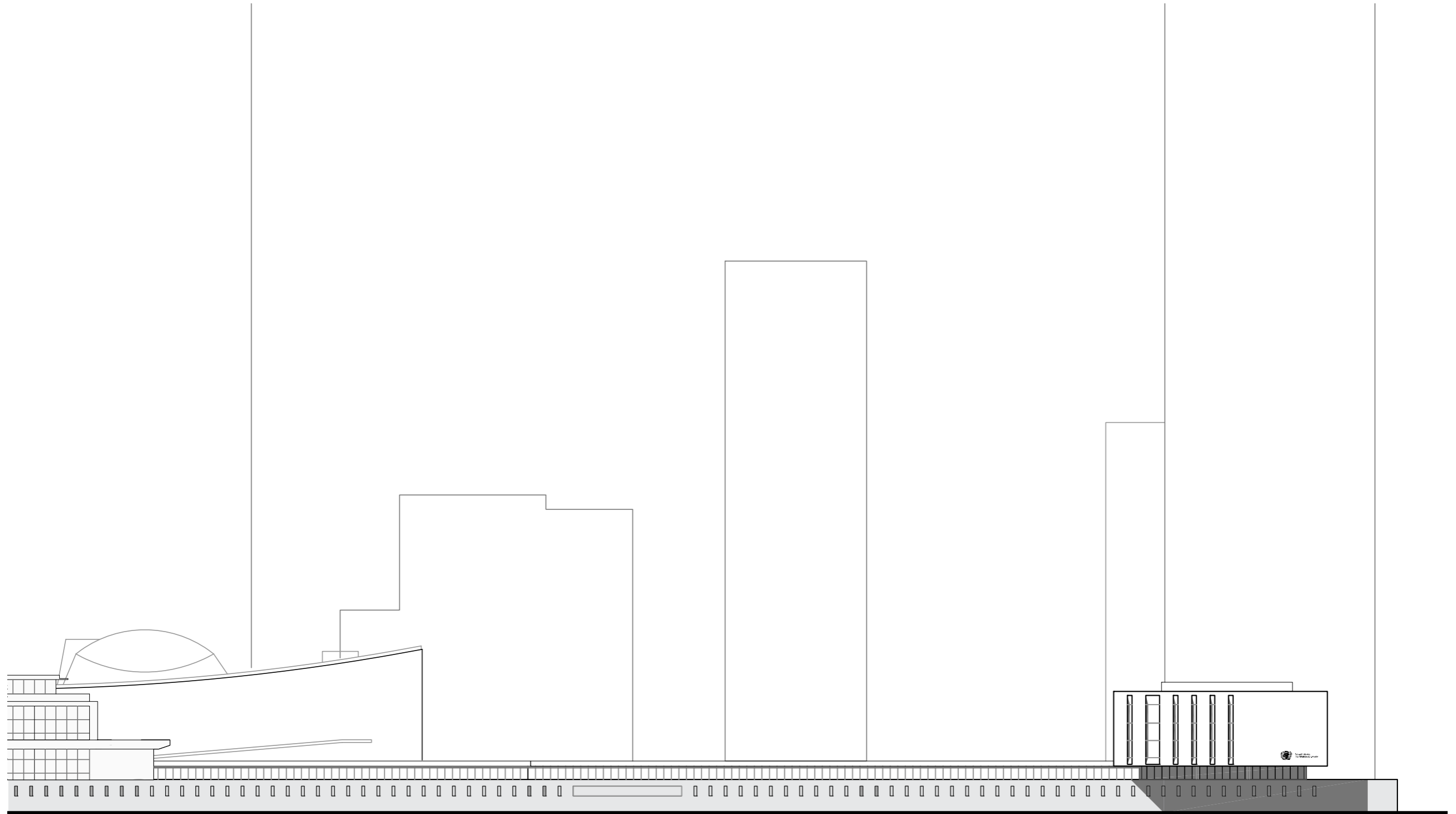


river heat / cold

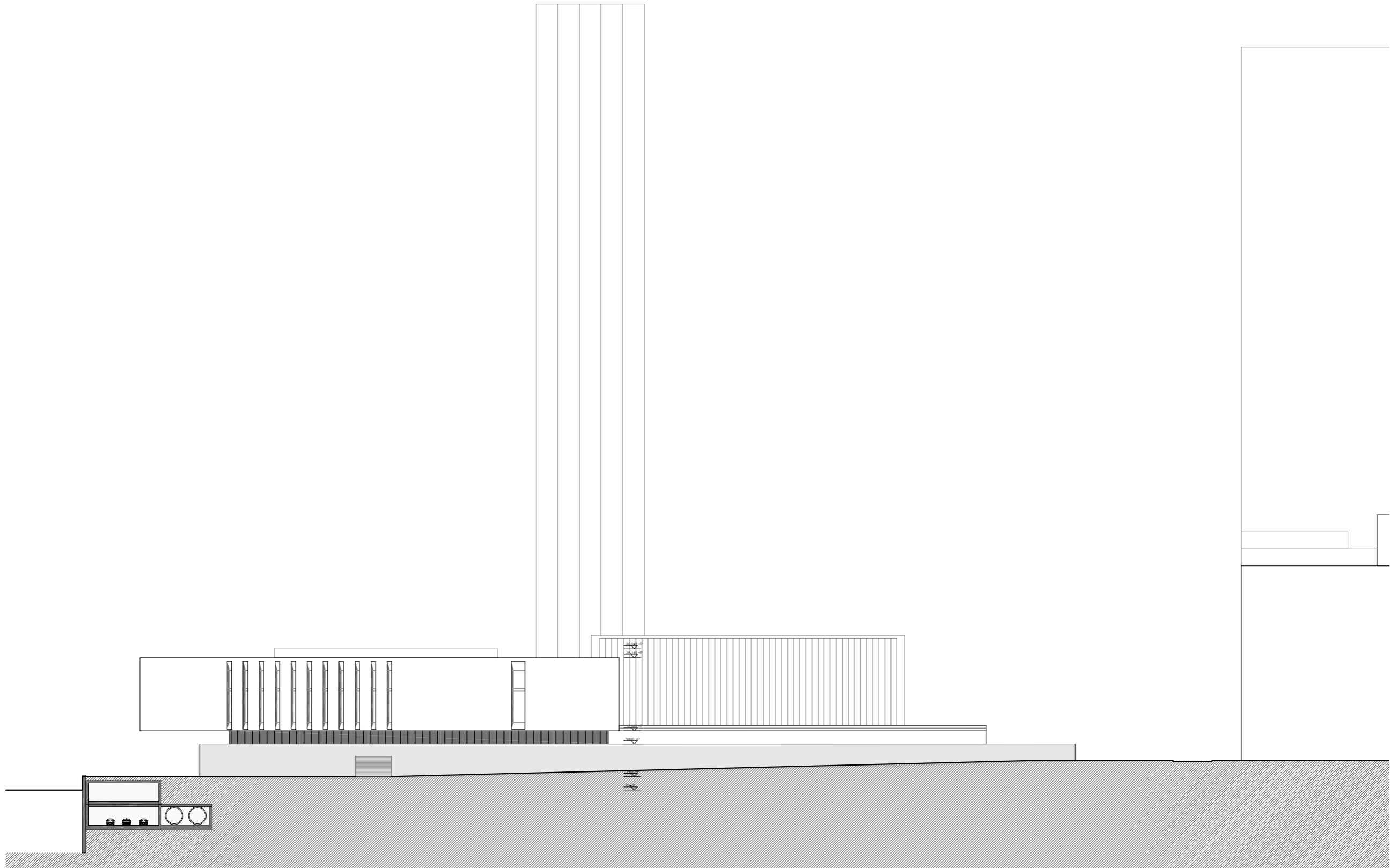
design facade



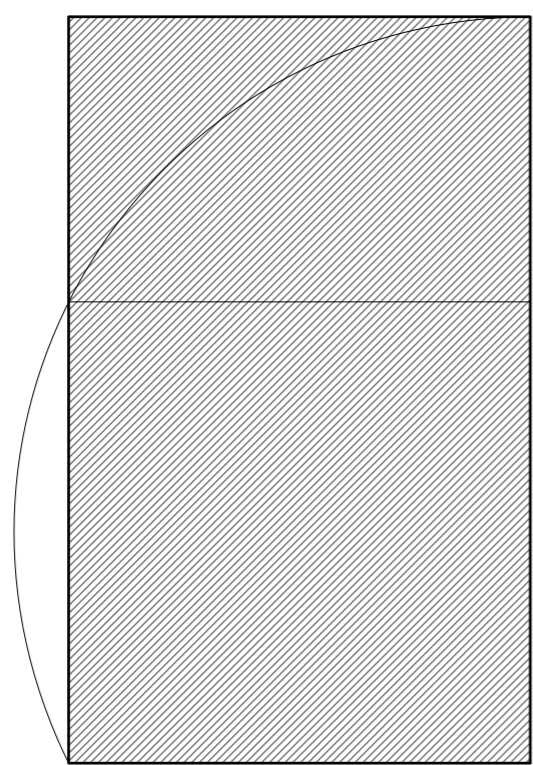
facade proportions



east elevation

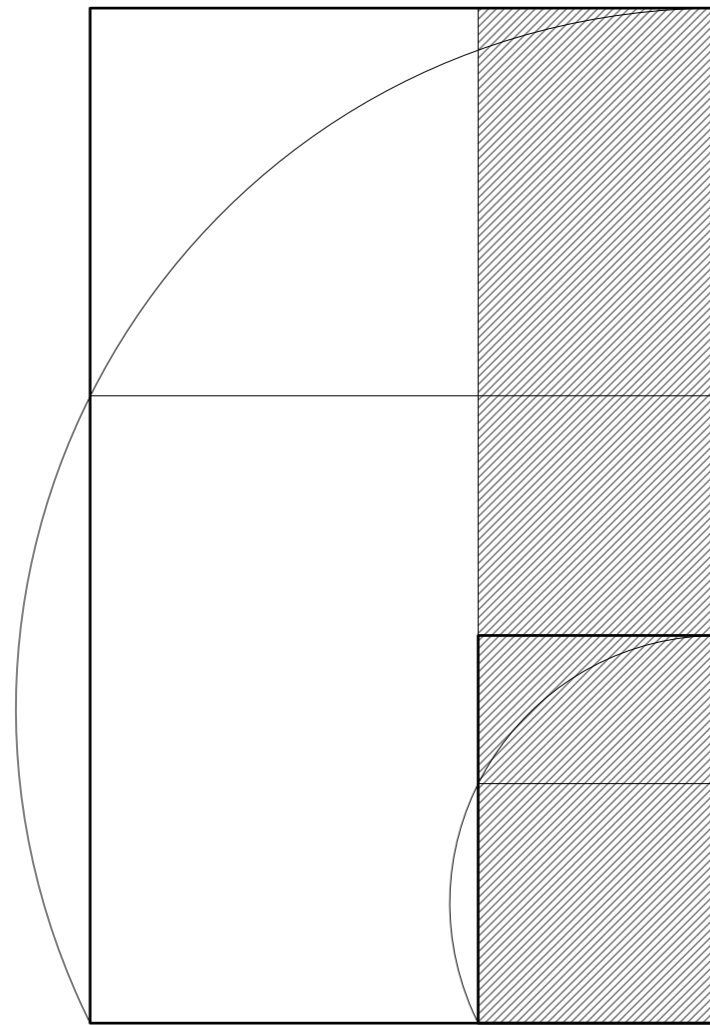


north elevation



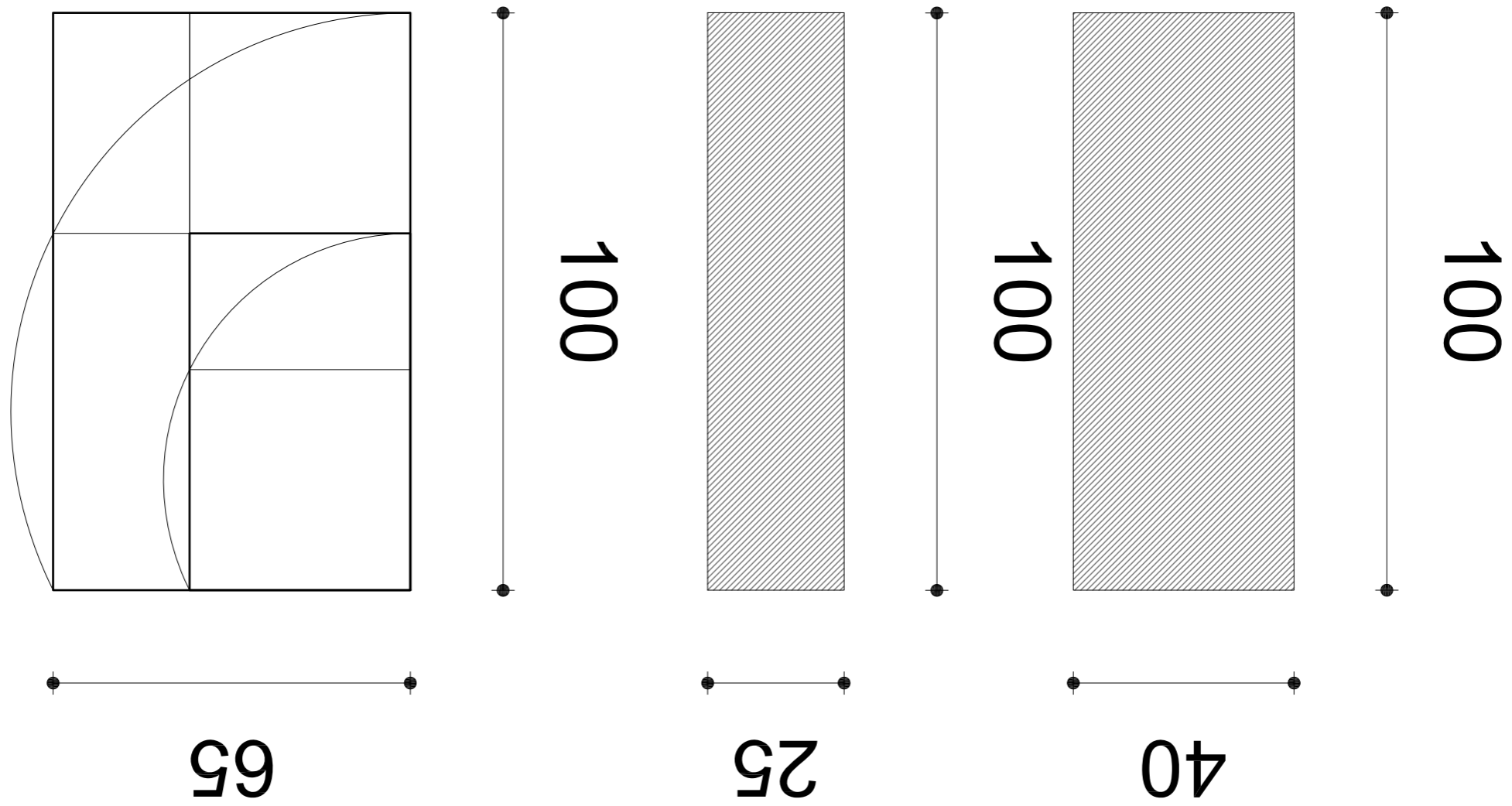
100

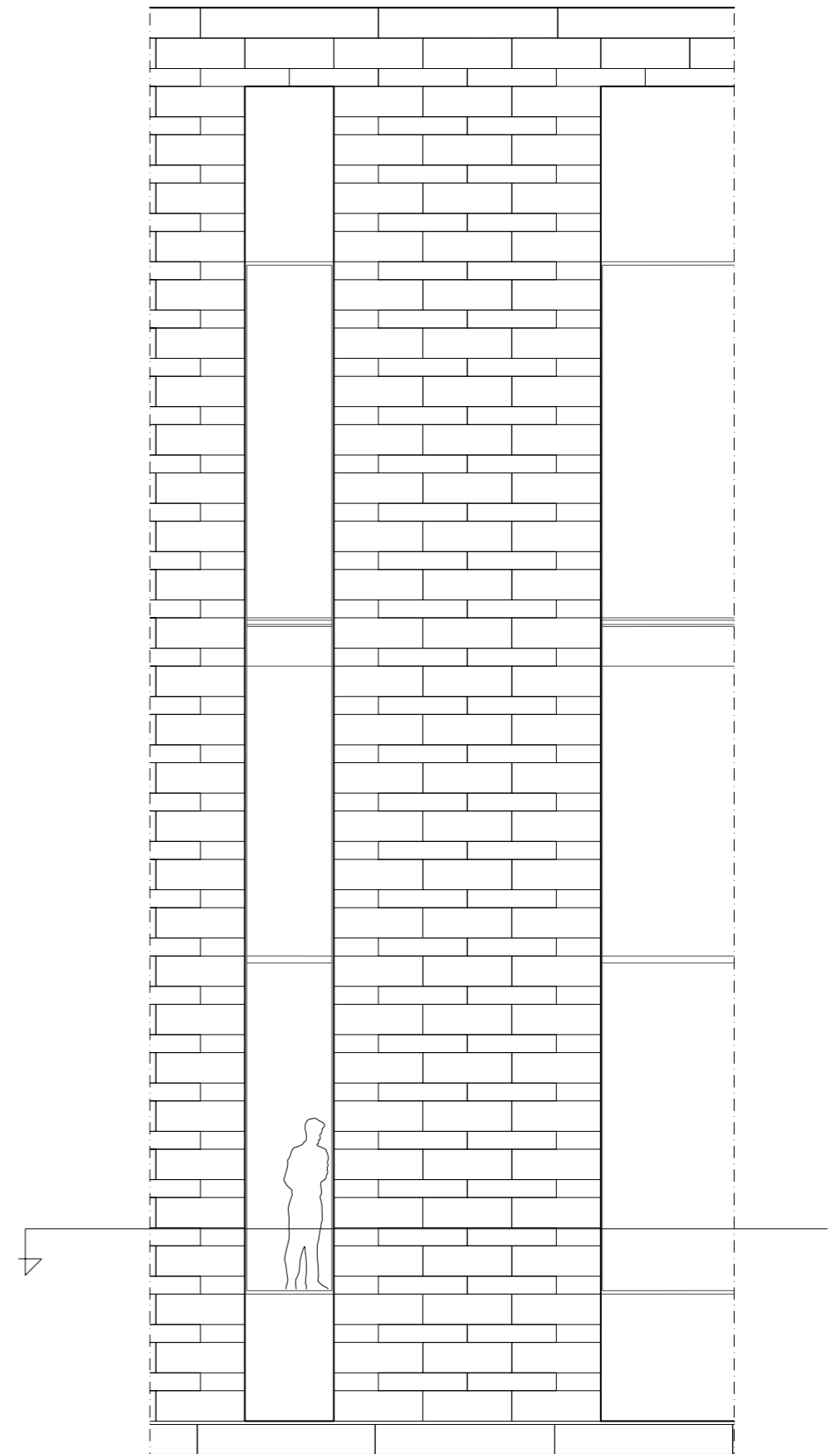
65

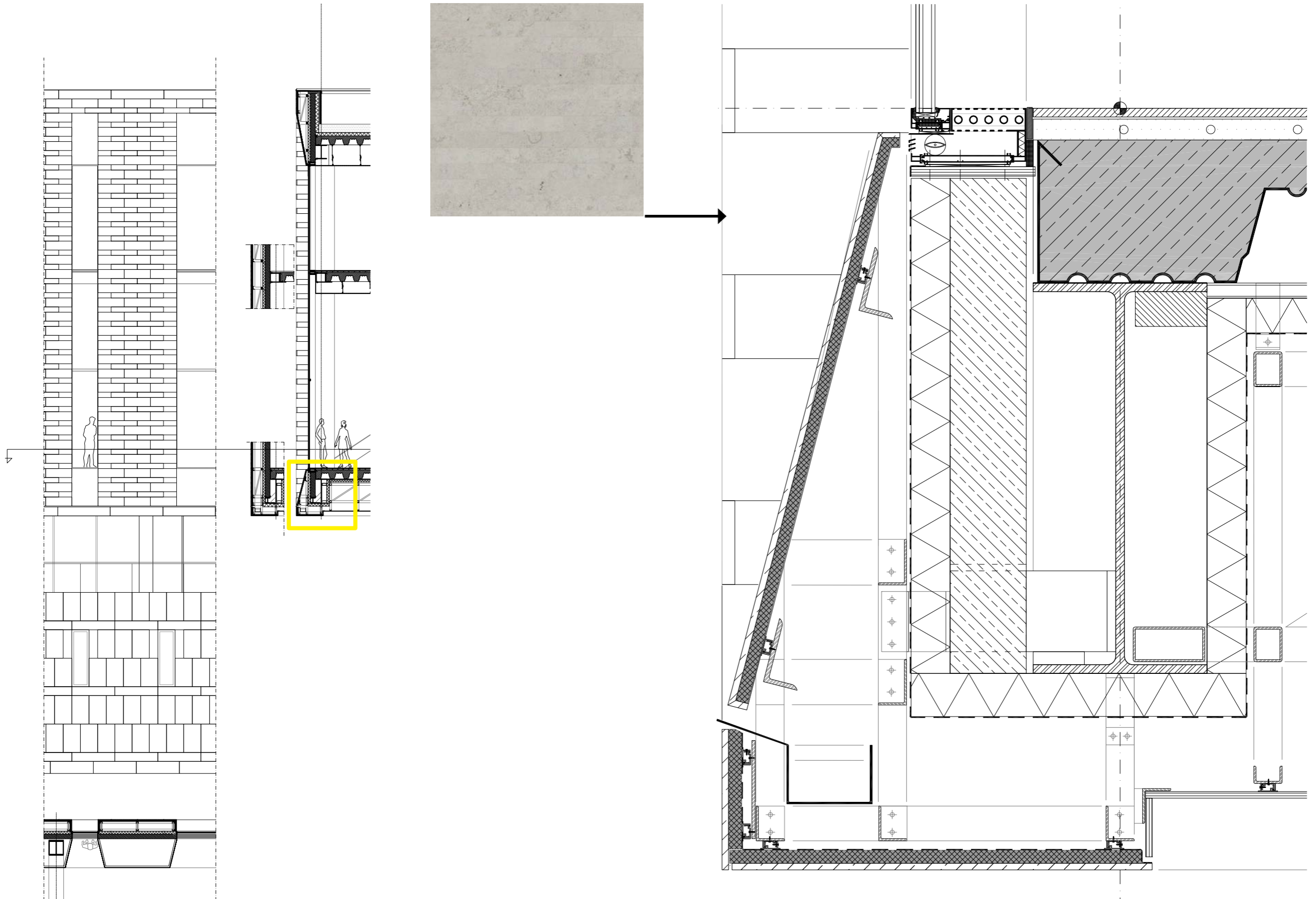


140

35

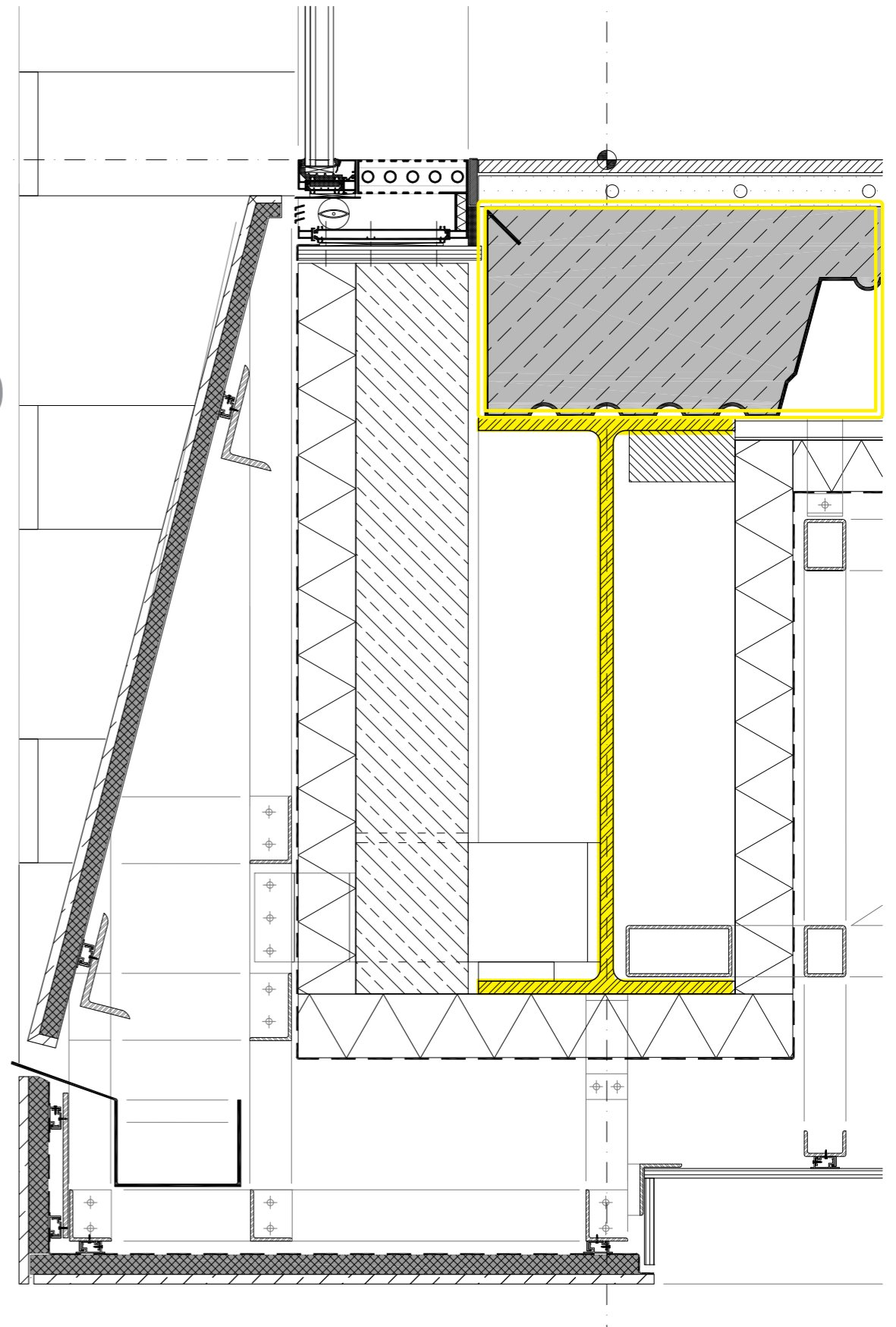
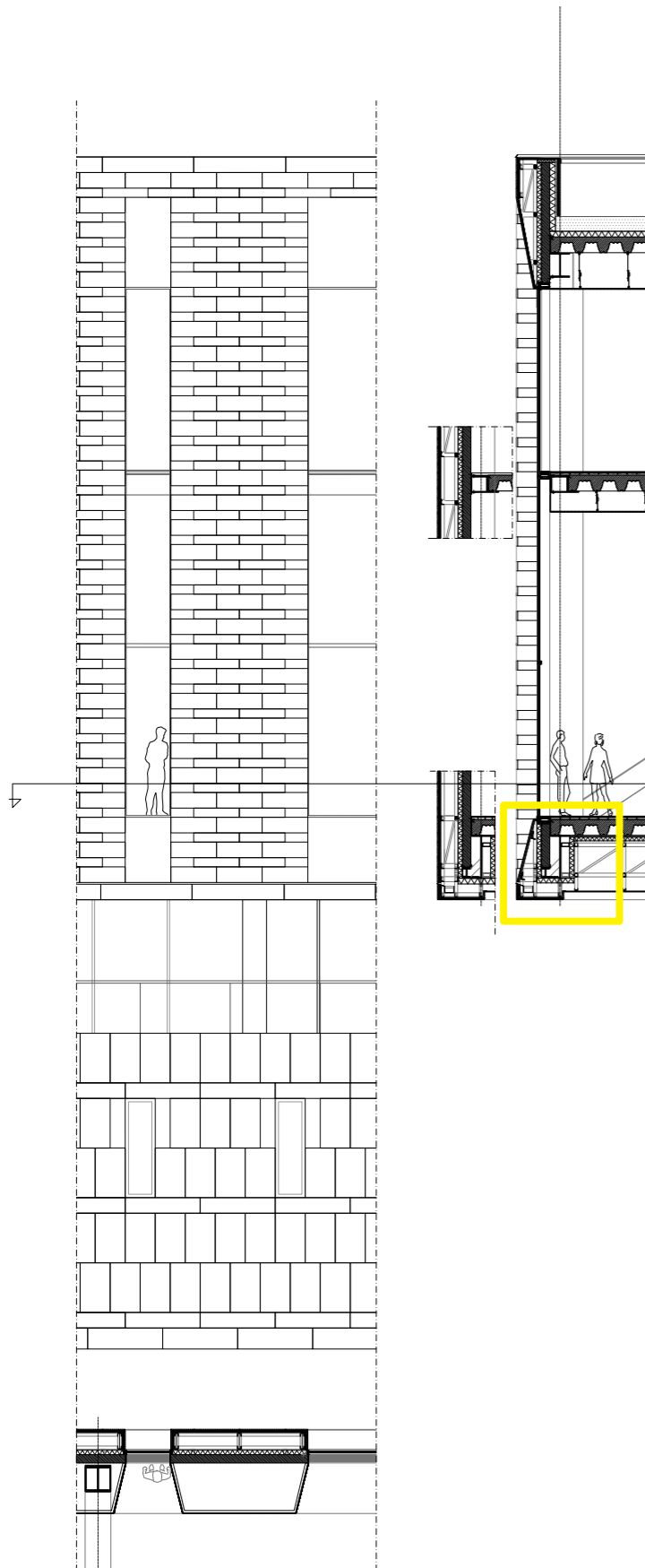






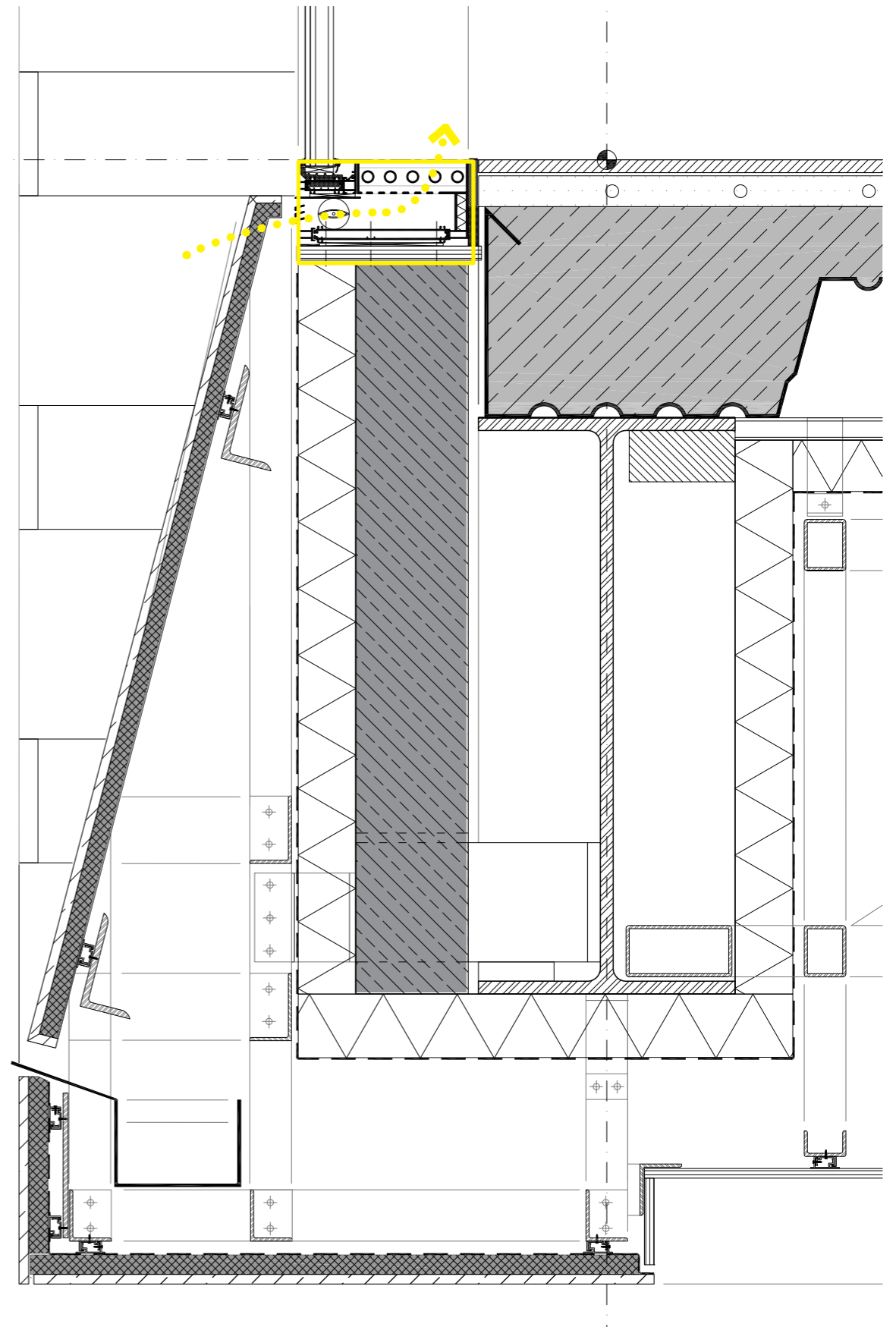
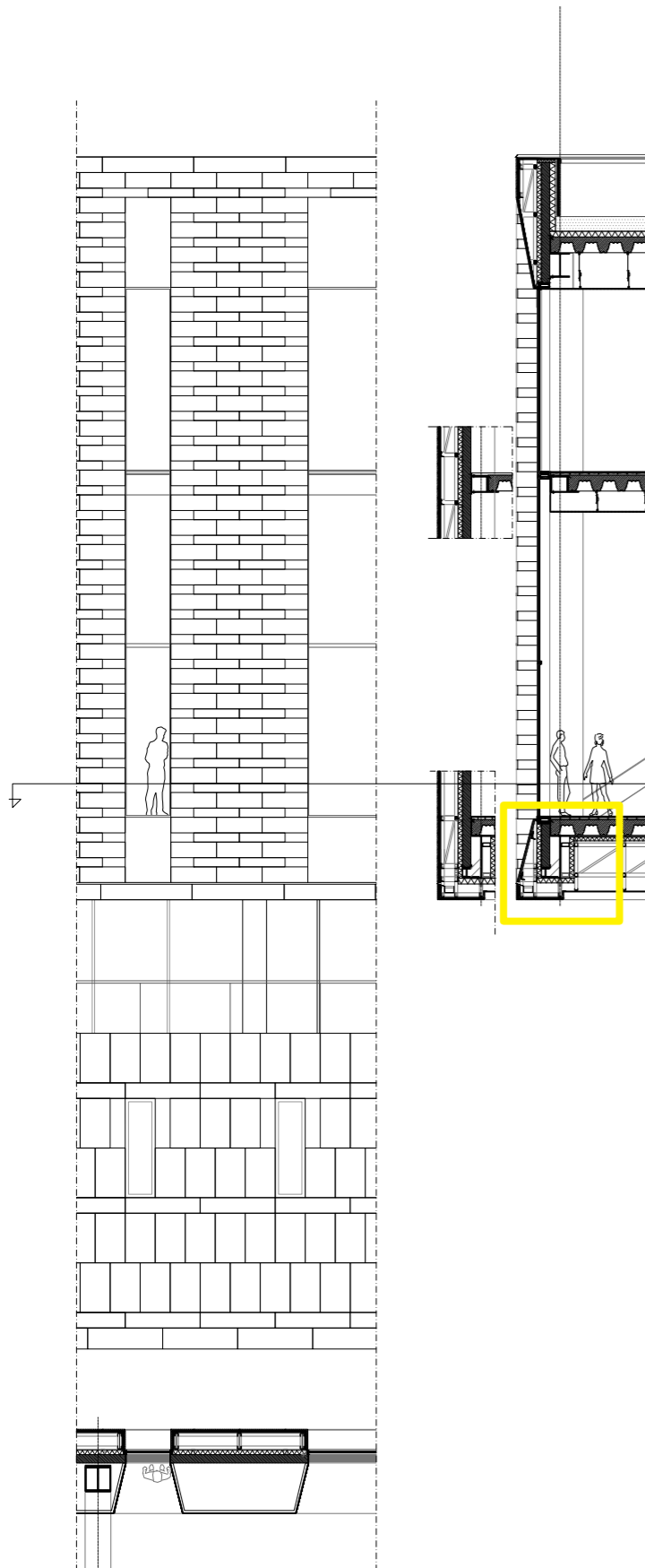
1950 steel
profile for
framework

steel concrete
hybrid floor 350
mm



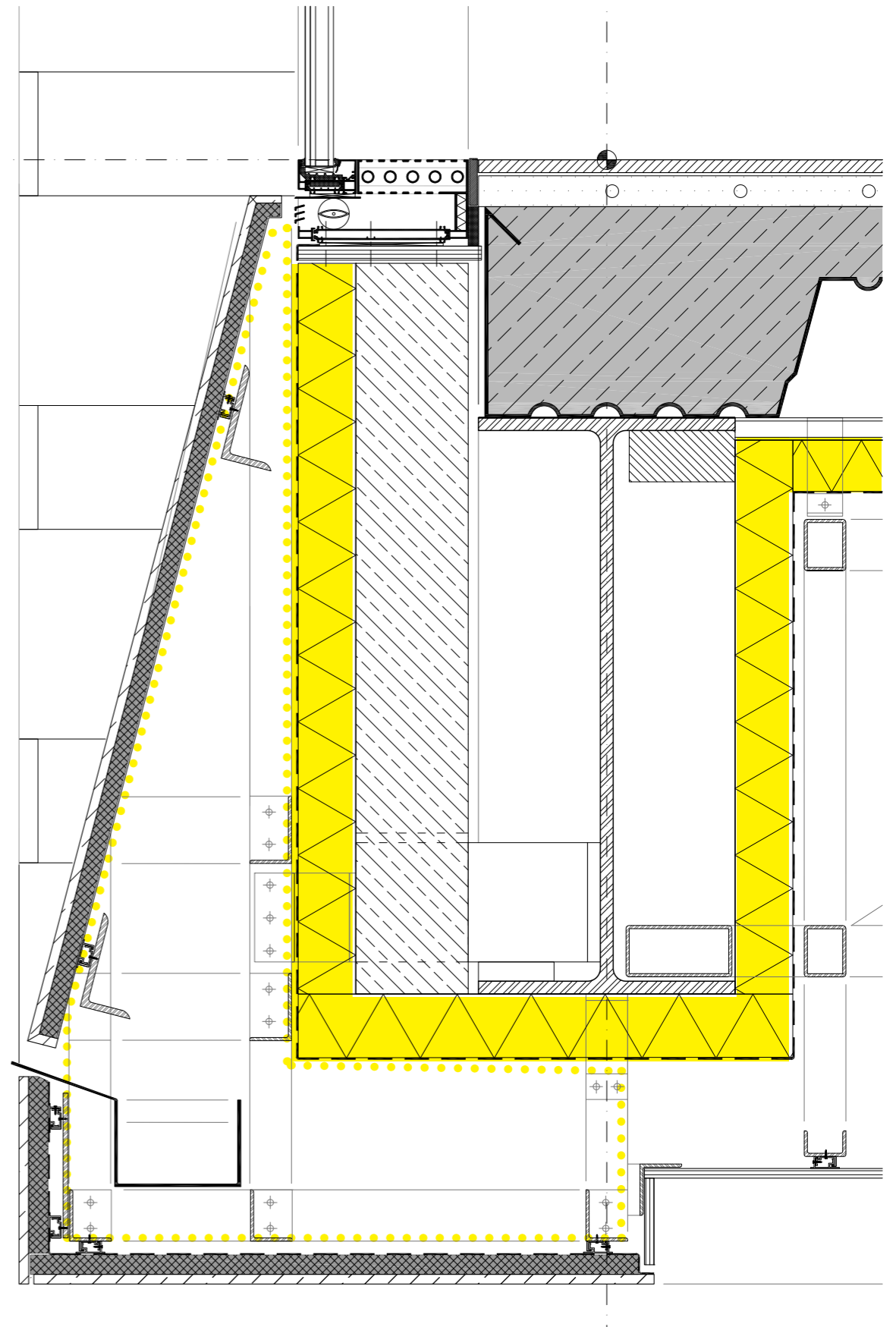
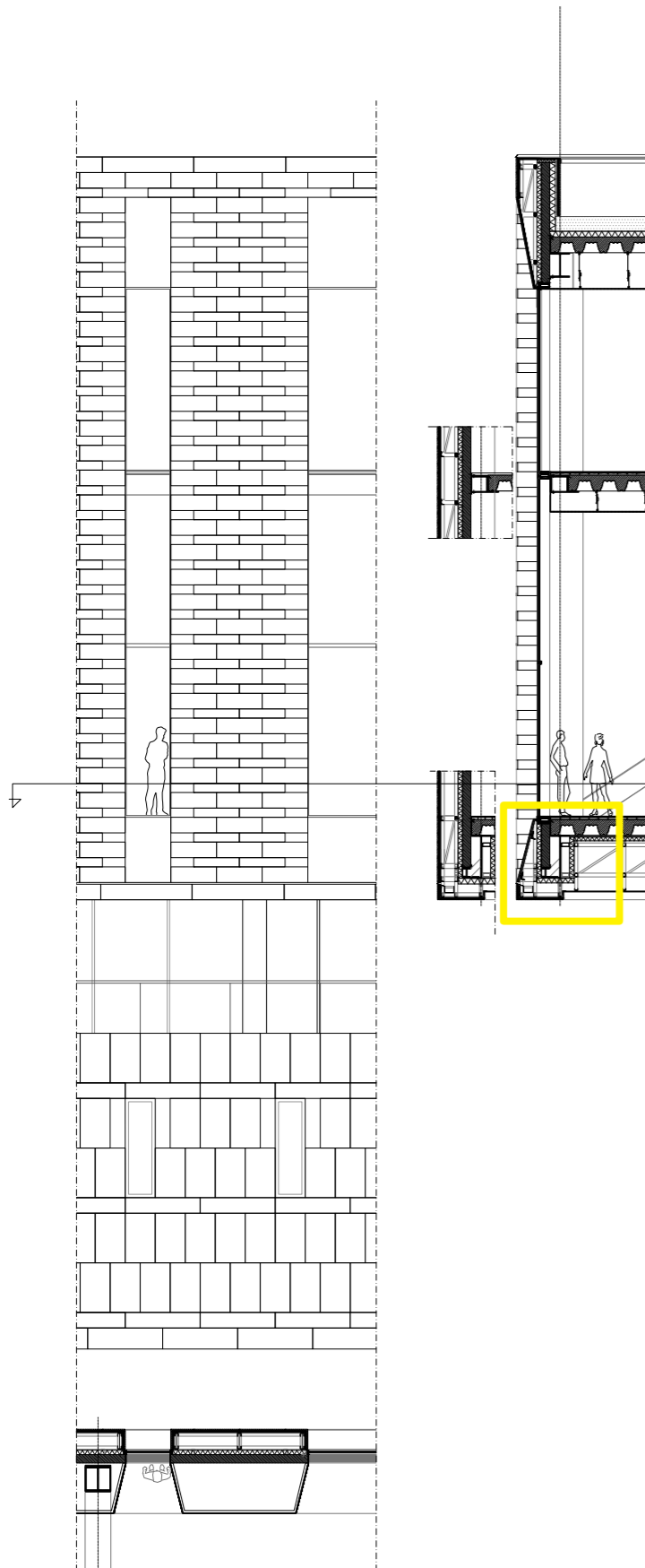
concrete
innerleaf (175
mm)

alu window
frame with
ventilation
unit



insulation 120 mm

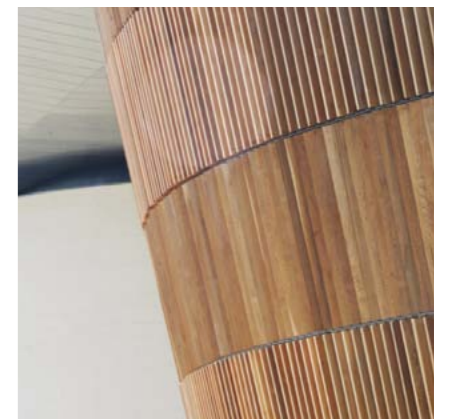
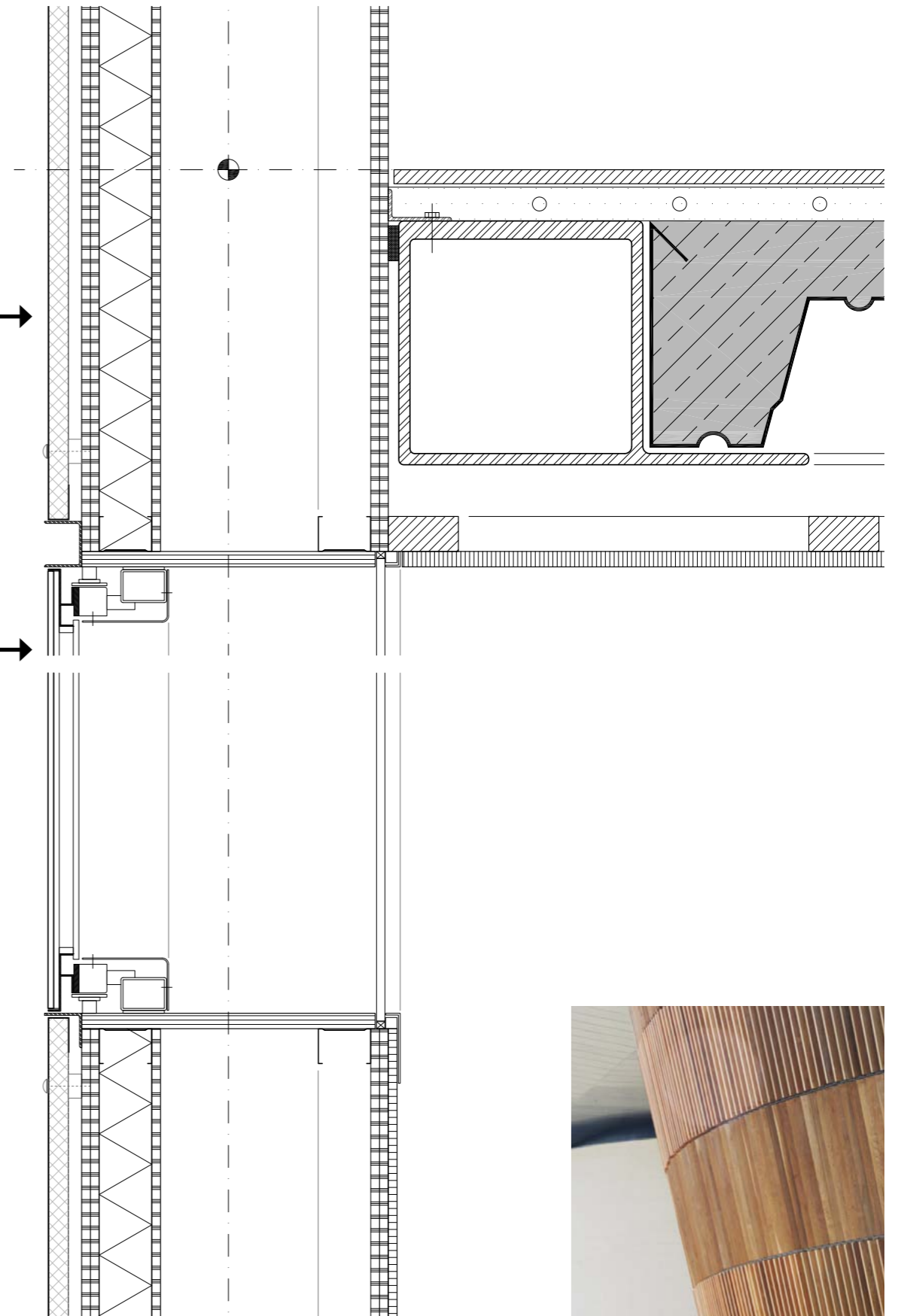
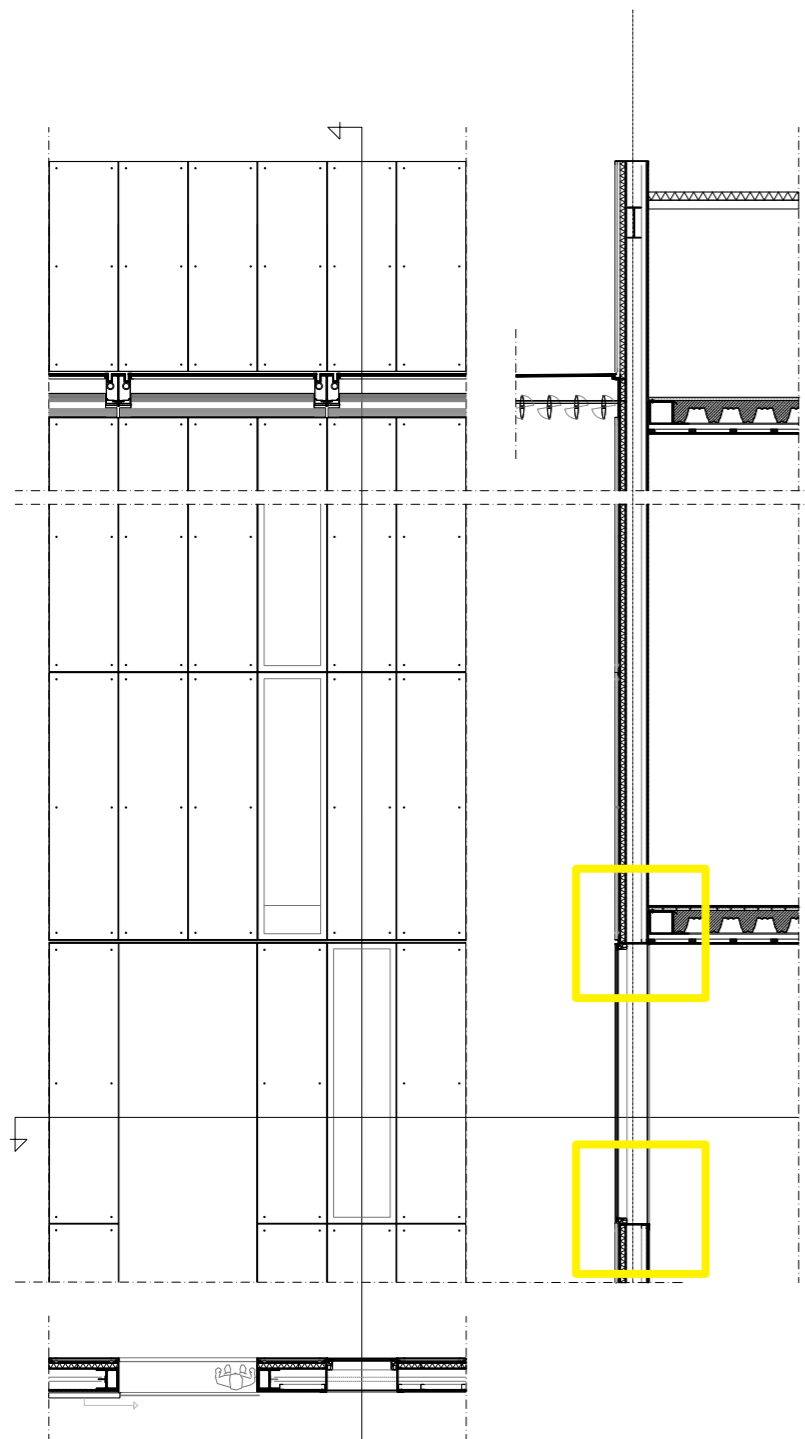
framework
for attaching
prefab facade
elements



exterior view waterfront park

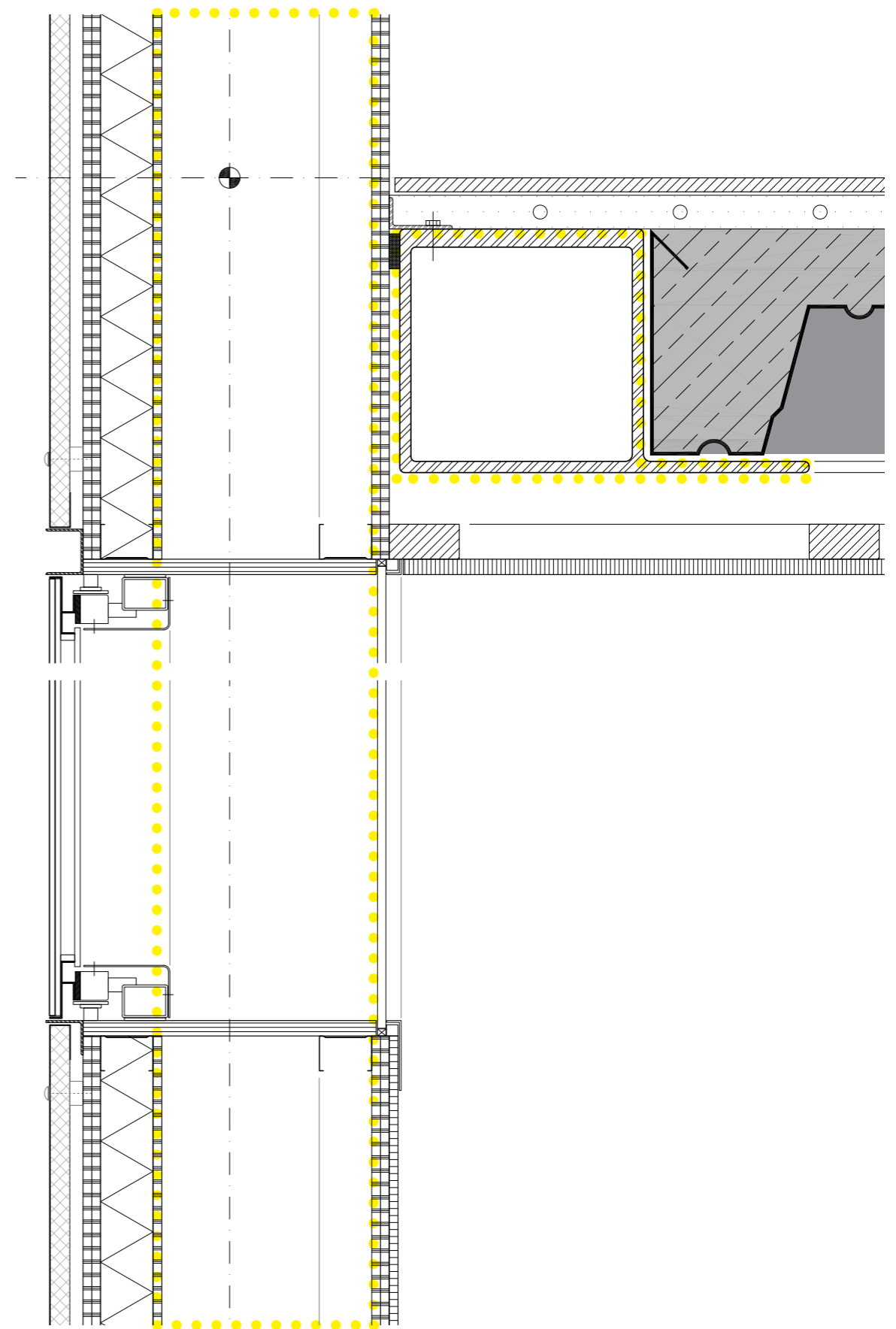
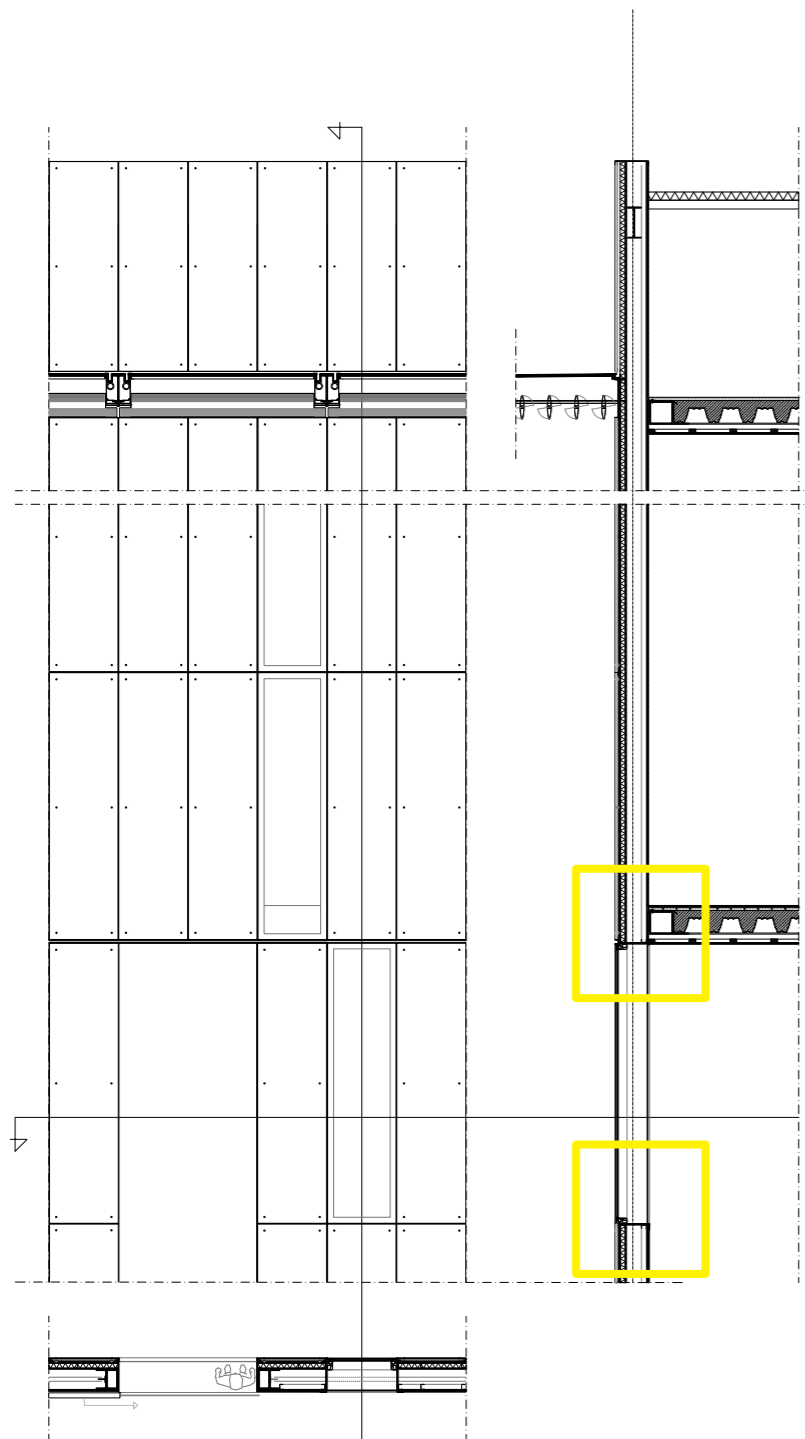




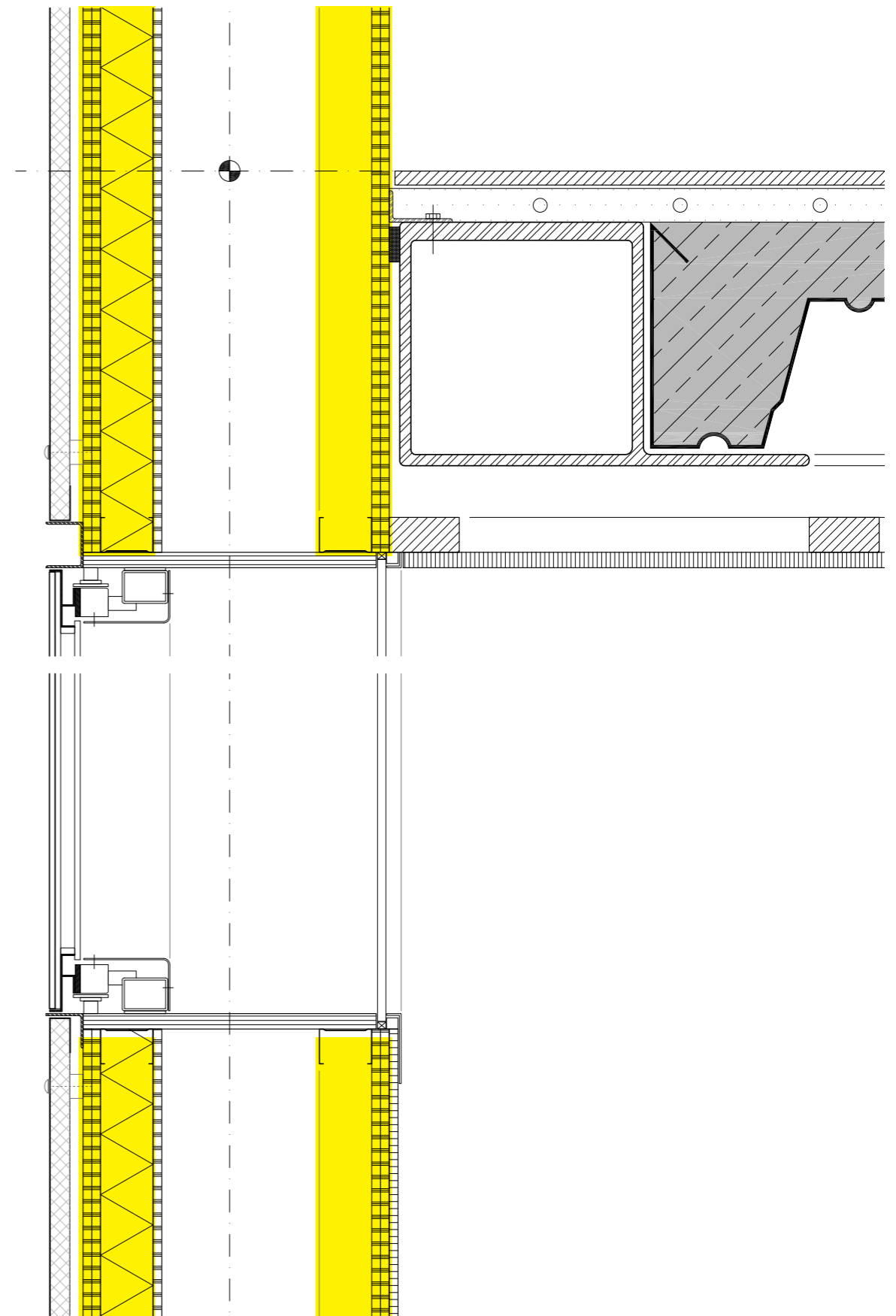
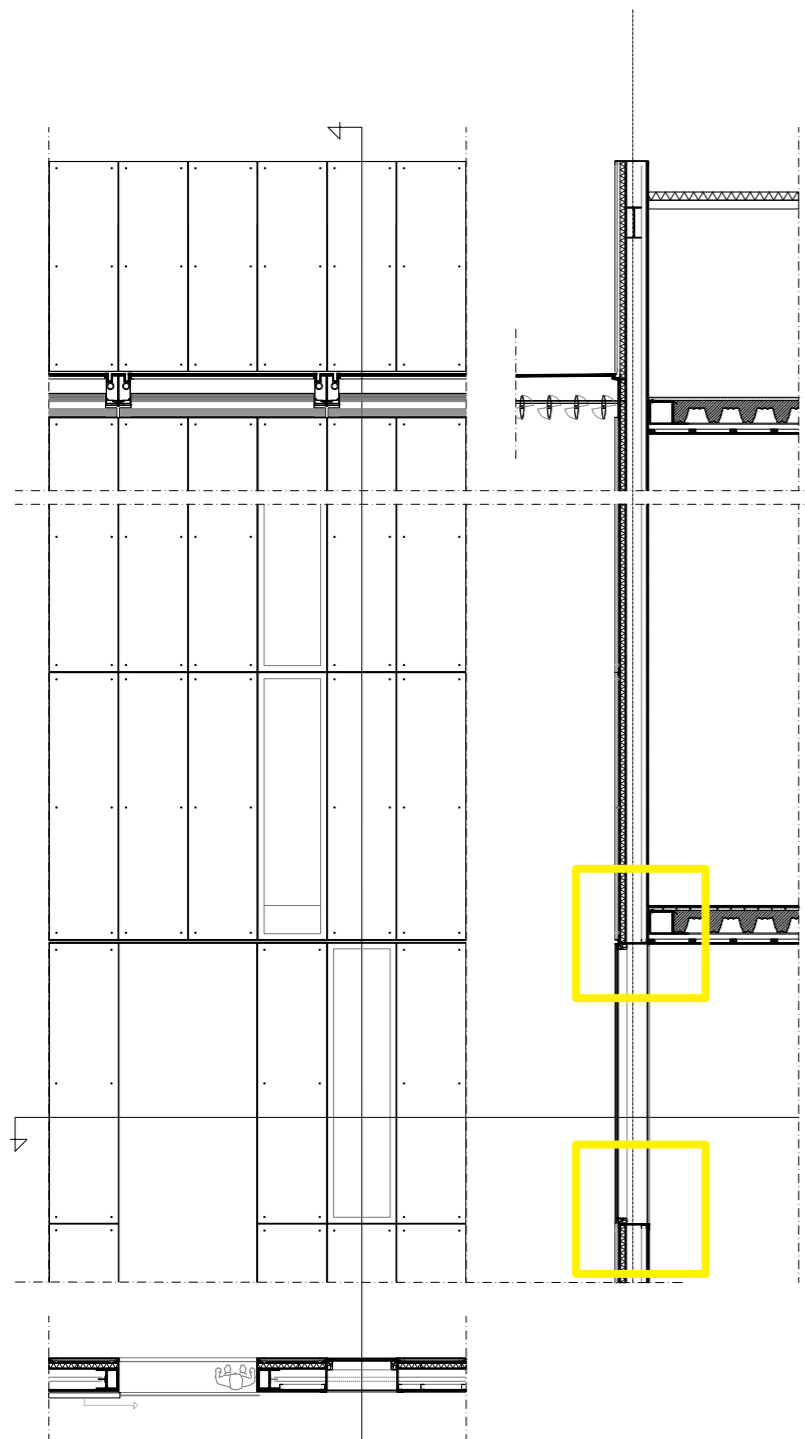


steel structure

steel
concrete
composite
floor



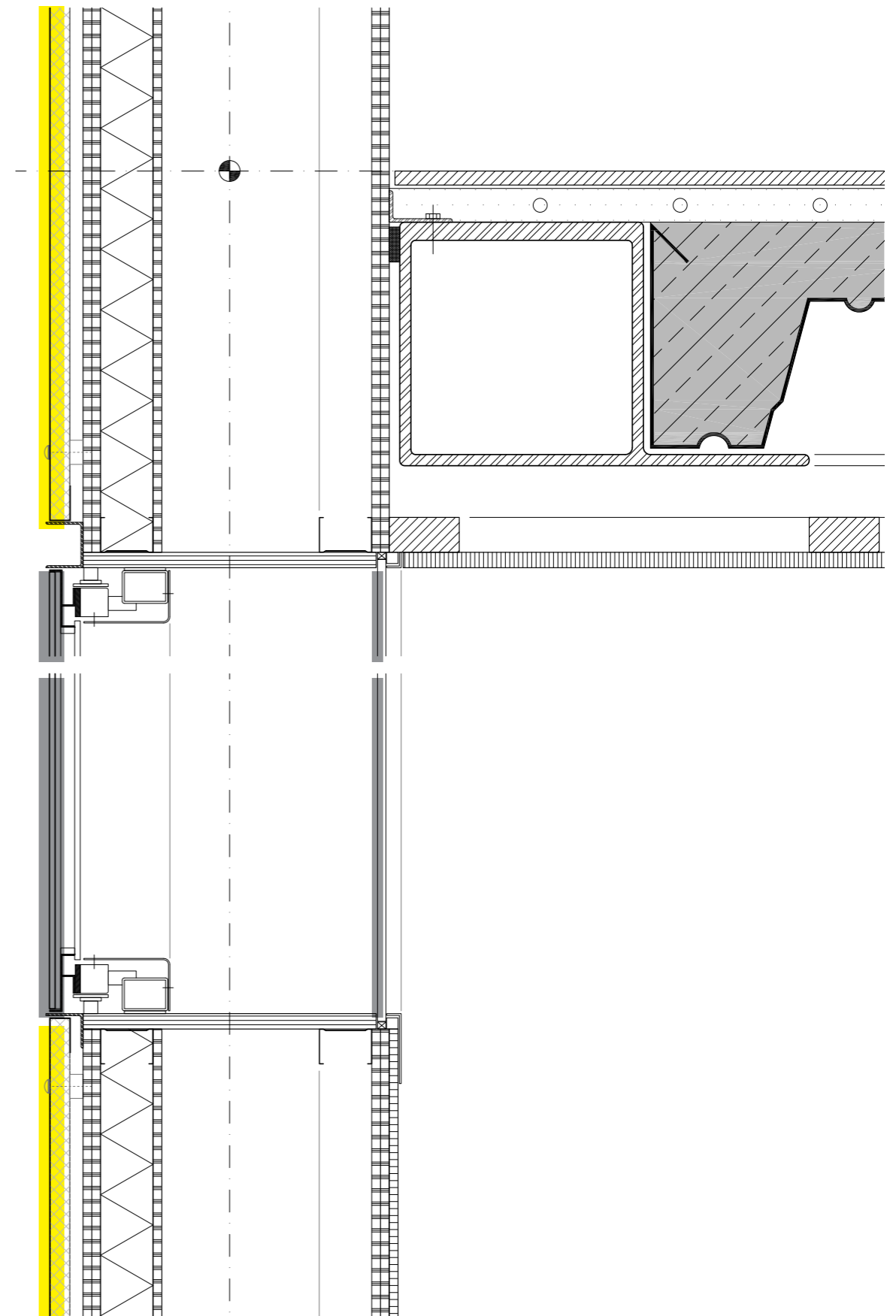
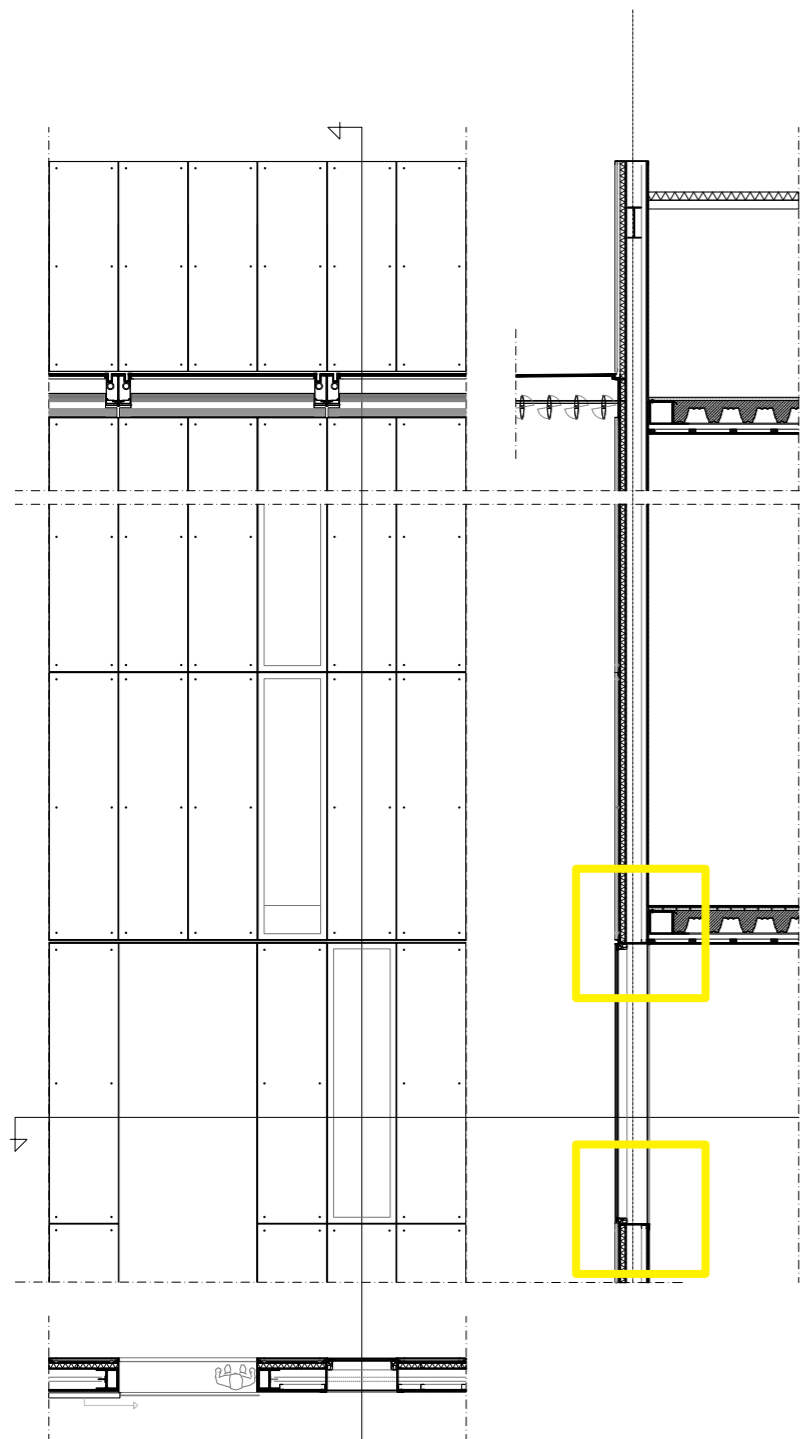
metal stud wall construction



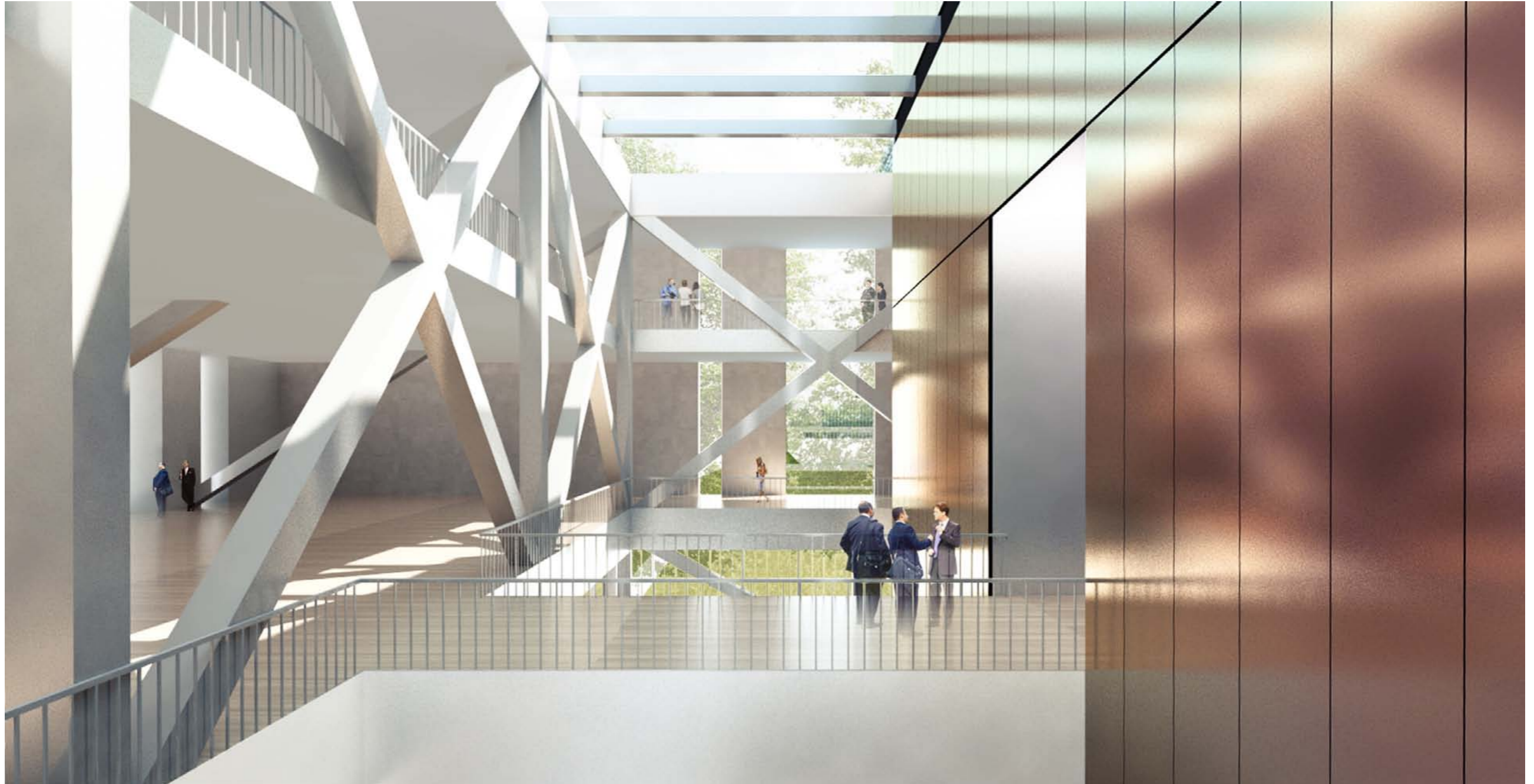
copper on
honeycomb
plates
(prefab)

glass with
copper mesh
interlayer

diffuse glass
panel



interior view lobby area



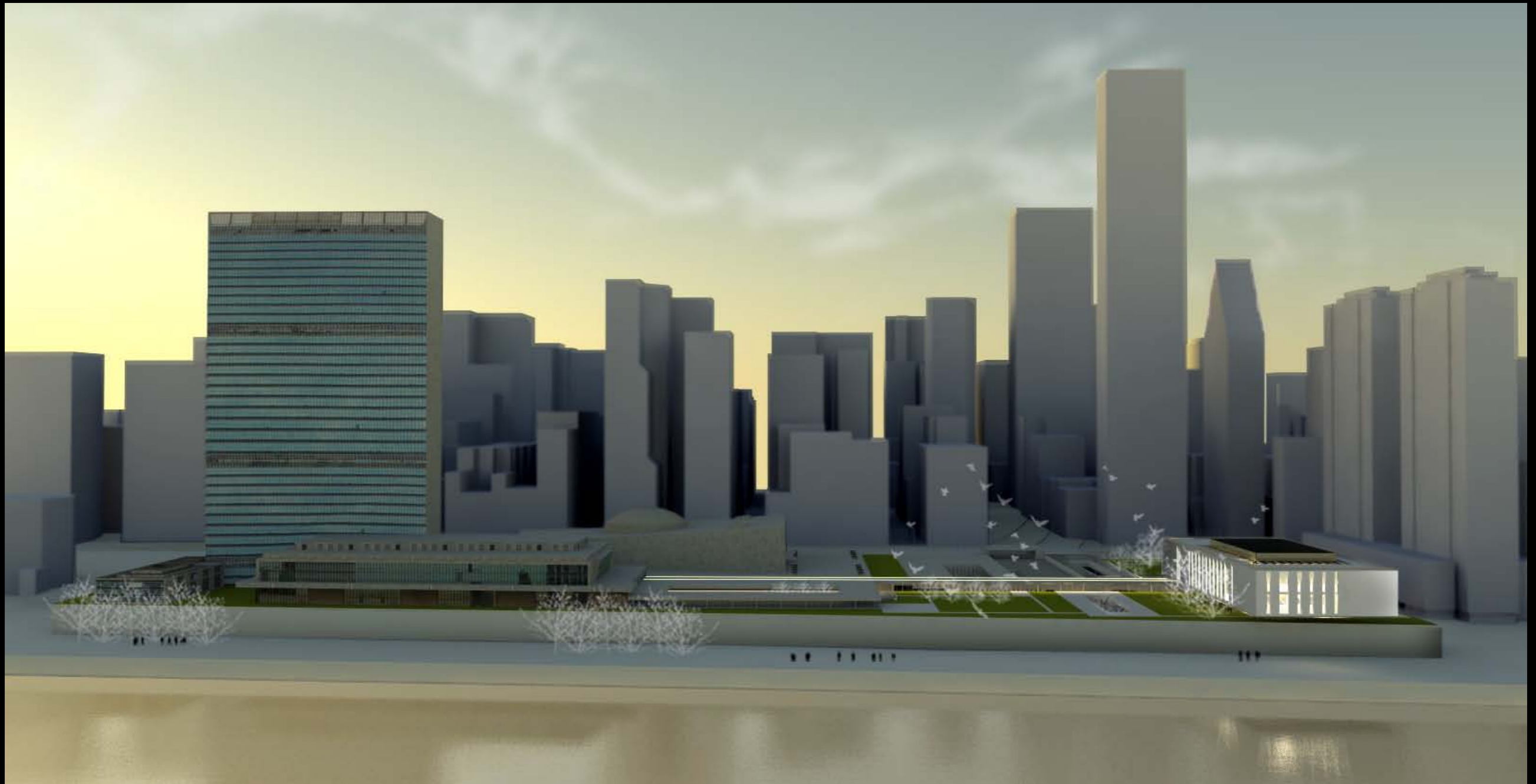
interior view: council room



5 summary

Location

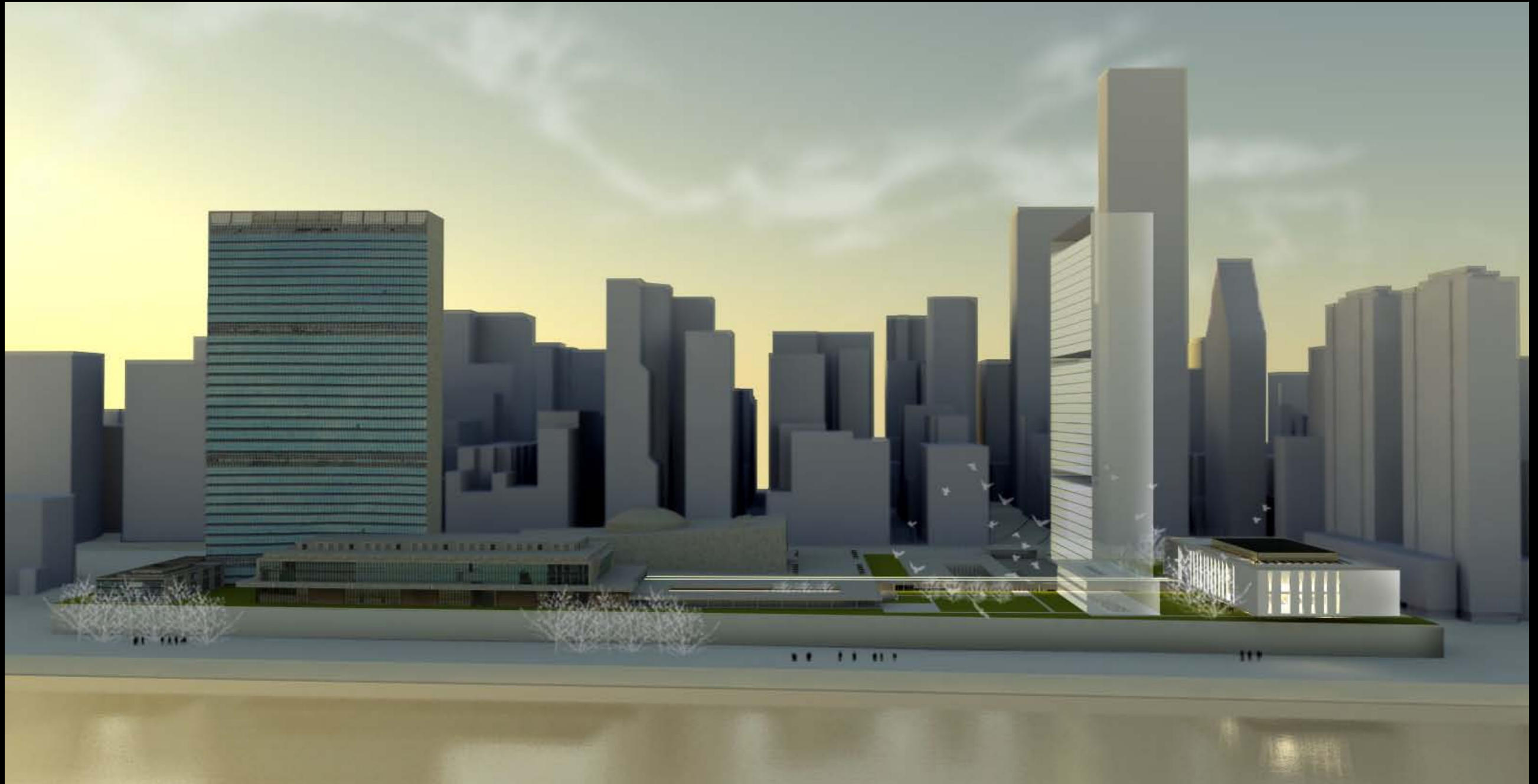
- a new park for NYC
- one new visitors entrance to ensure safety

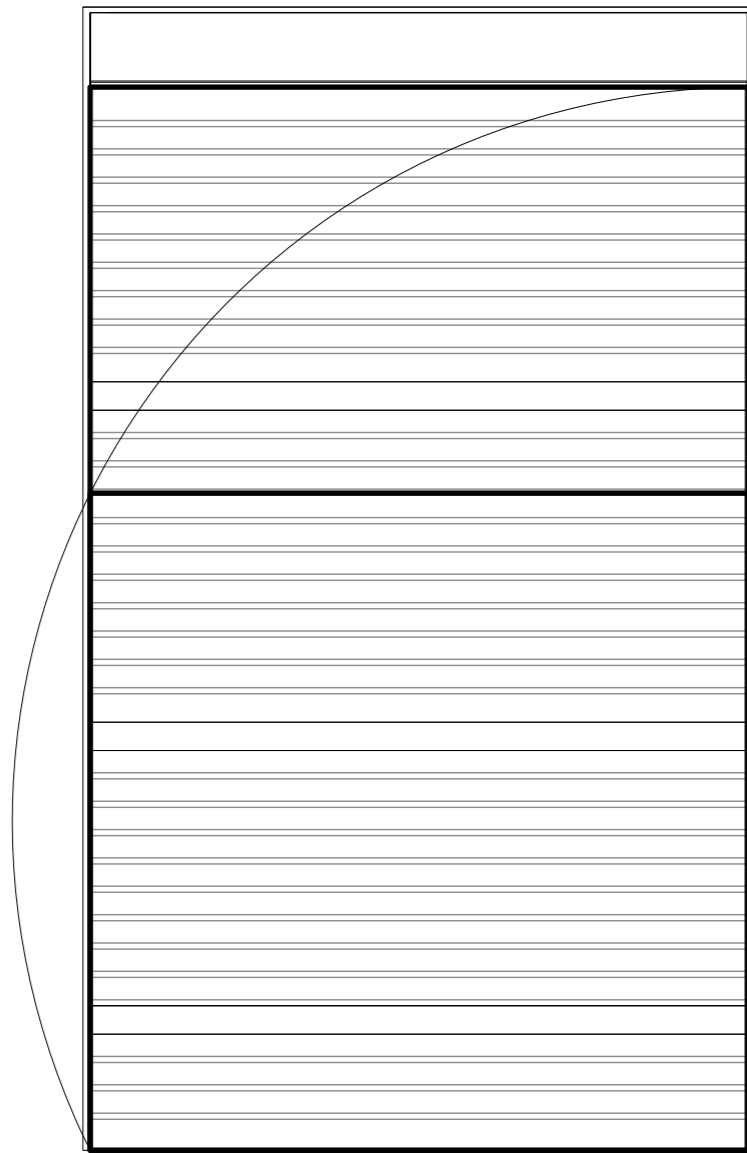


1987: Brundtland Commission

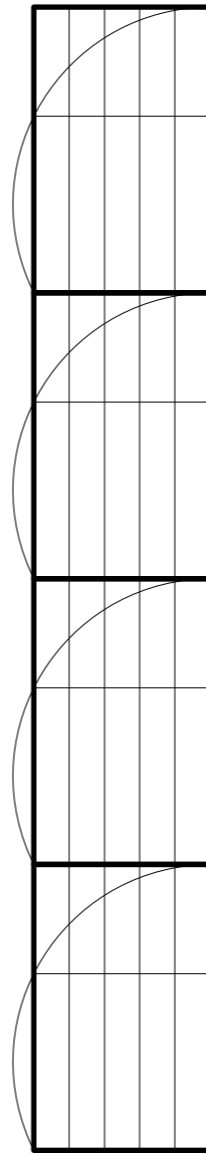
“sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”



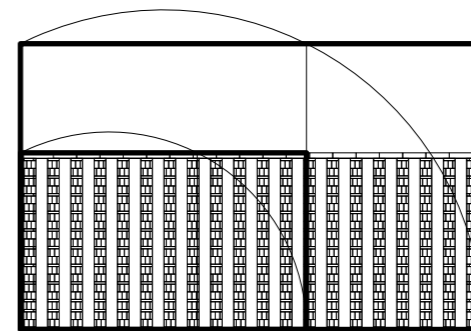




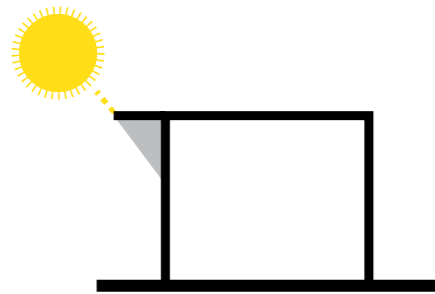
front secretariat



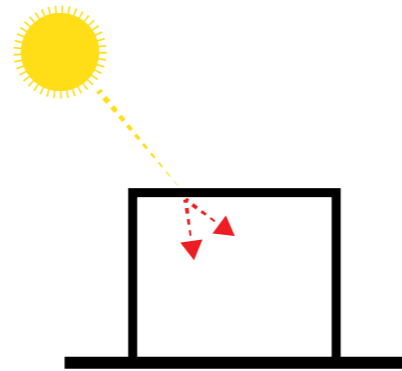
side secretariat



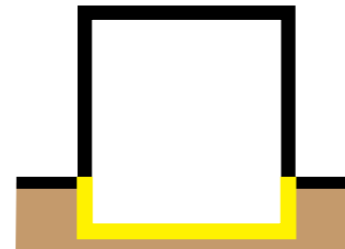
front general assembly



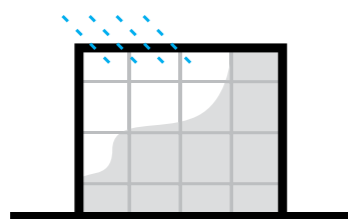
solar shading



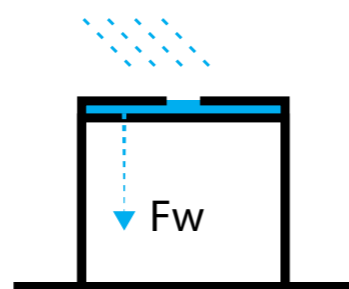
passive solar heating



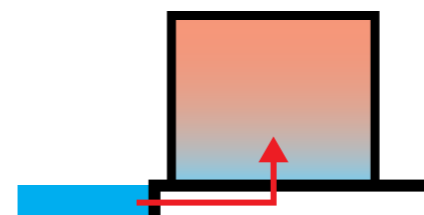
earth coupling



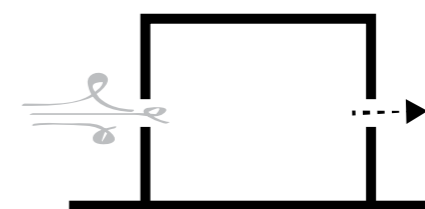
self cleaning materials



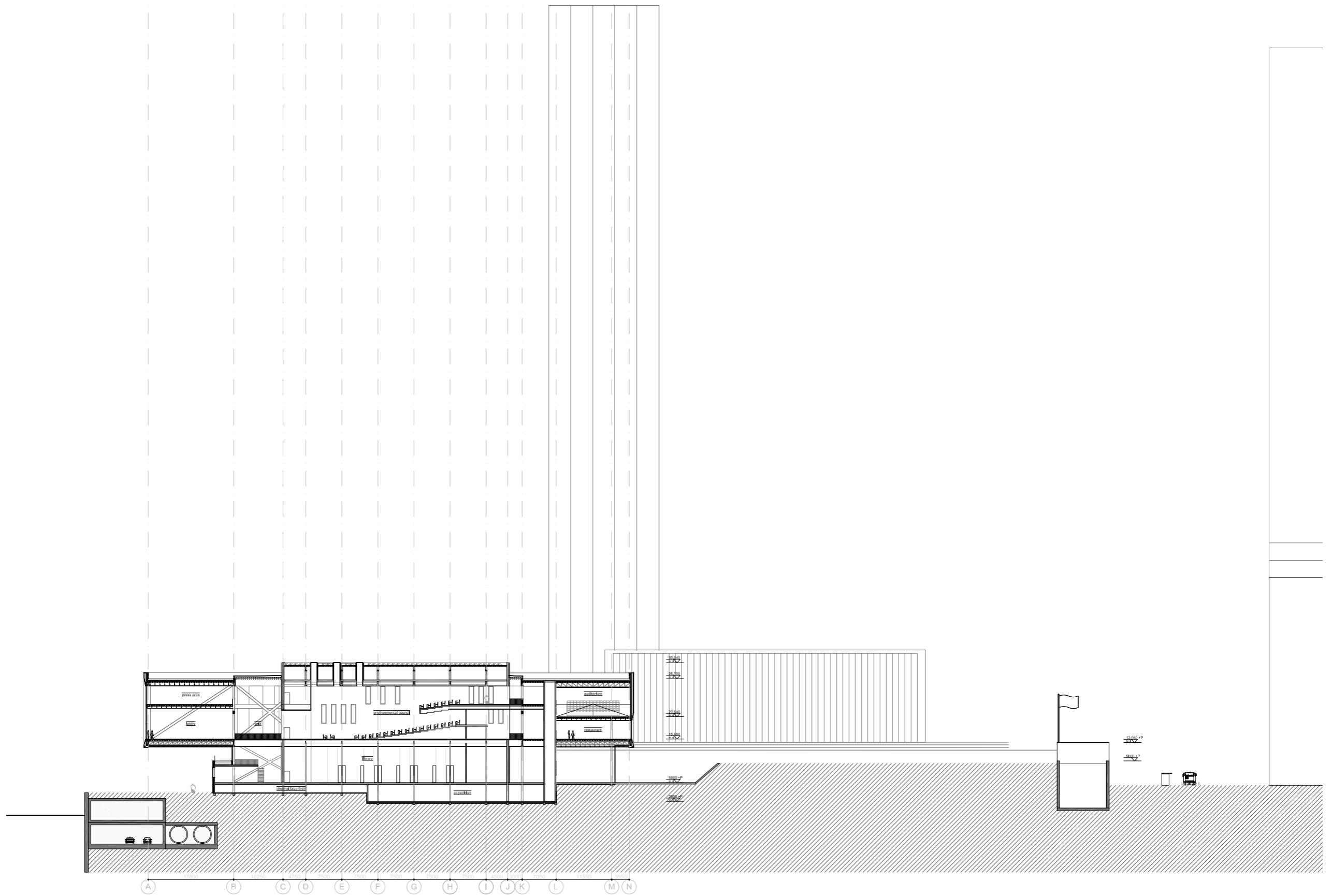
grey water storage



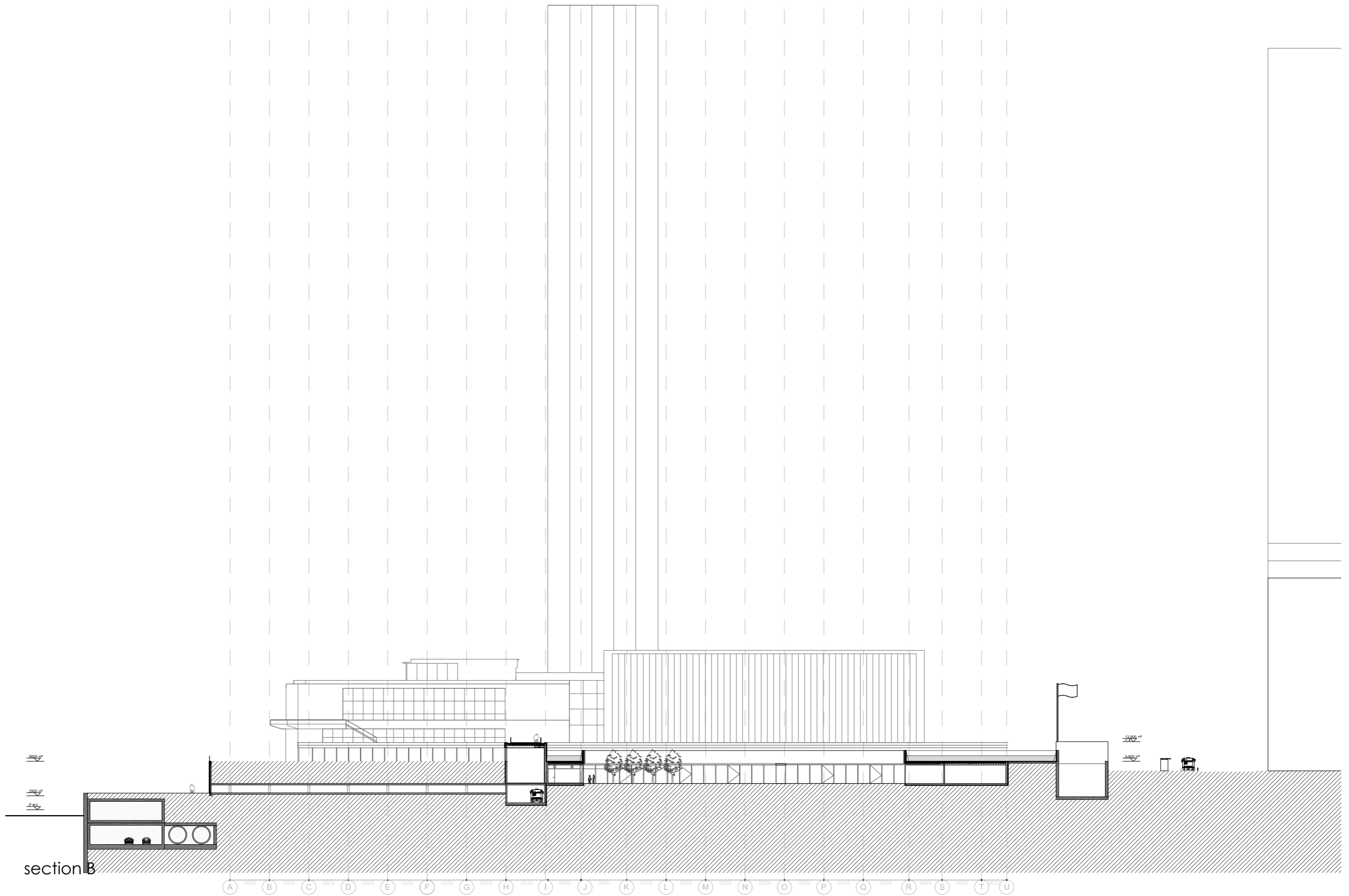
river heat/ cold gain



natural ventilation



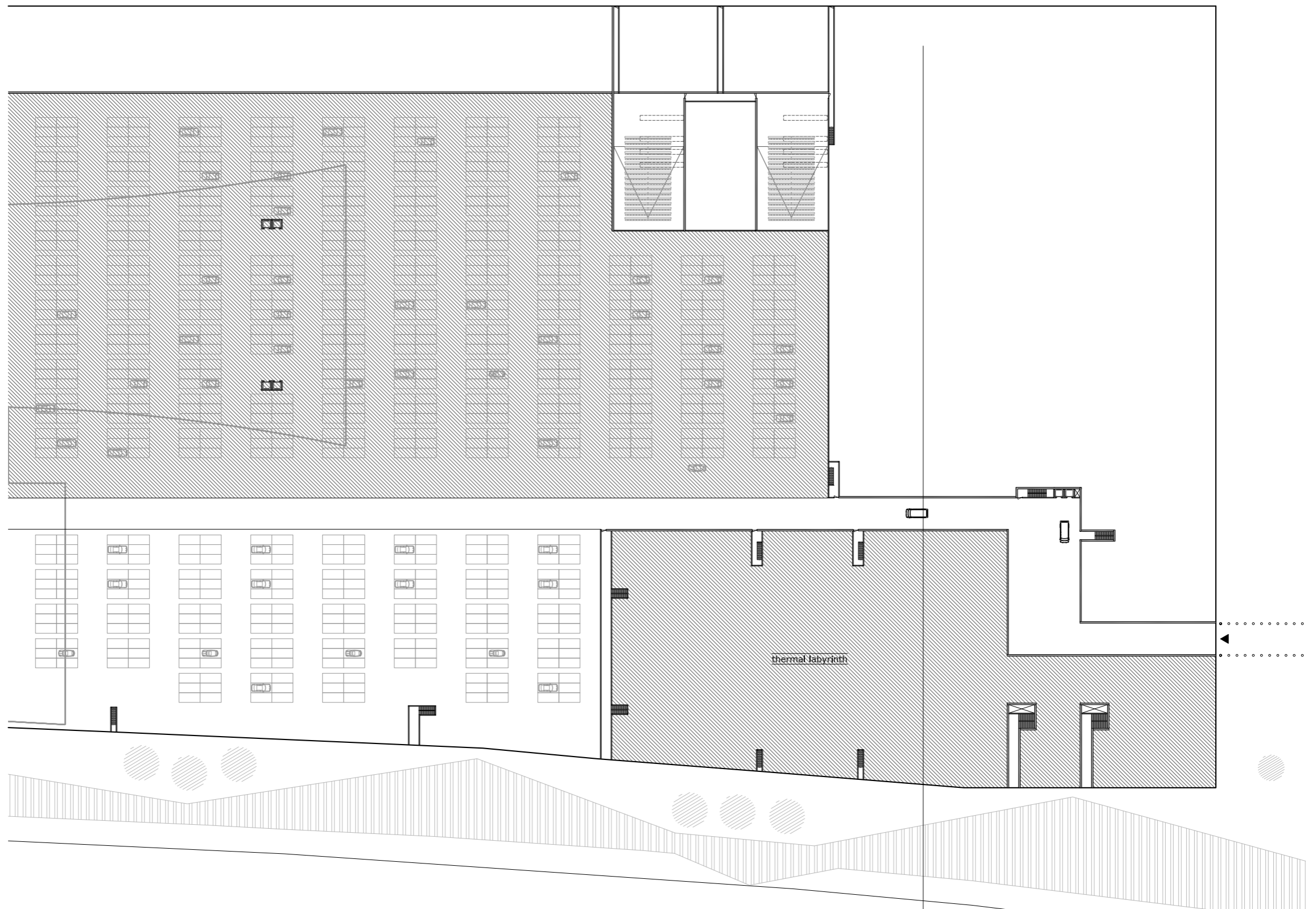
section A



section B



Plan -1



Plan -2