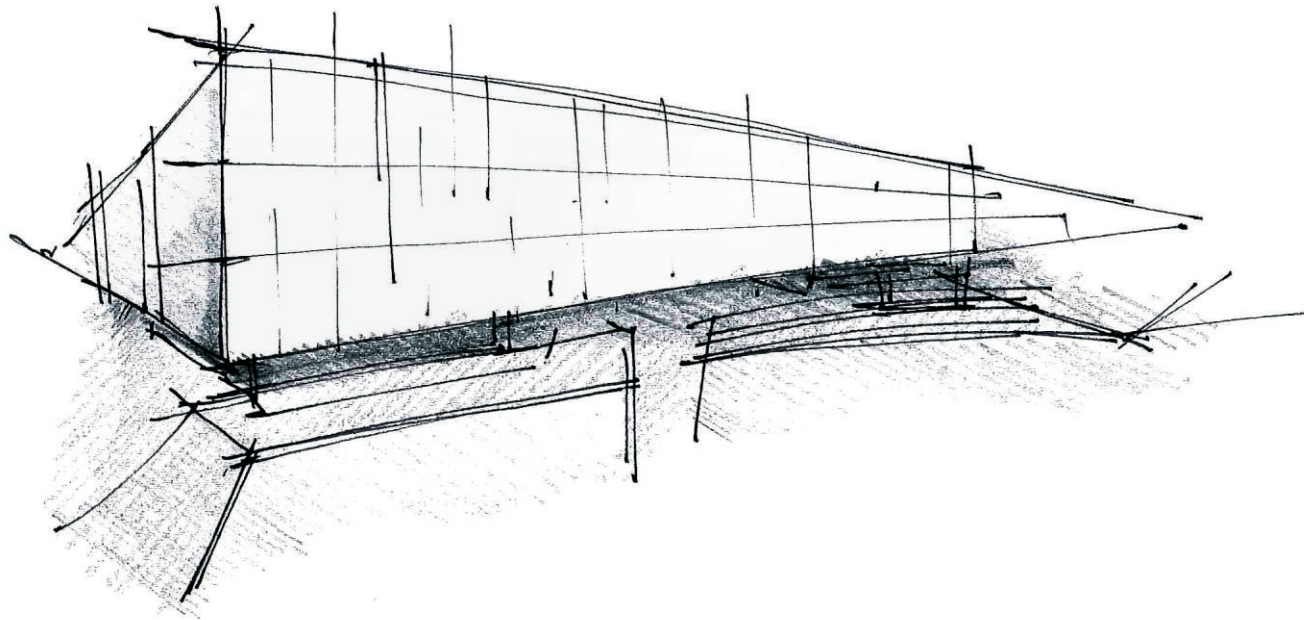


P5 presentation

University Library and Learning Center for Uva, Amsterdam



Eva Závodná_4117999

Christoph Grafe
Mark Pimlott
Henk Muhl

Interiors, Building and Cities
Faculty of Architecture, TU Delft

Contents

Problem

Research

 Typology

 Program

 Location

Design

 Concept

 Urban plan

 Building

 Interiors

 Technical solution

Closing note

Problem

University Library and Learning Center
for University of Amsterdam
with the given program of 23.000 m²
on a chosen location in Amsterdam.

Research questions

University Library and Learning Center
for University of Amsterdam
with the given program of 23.000 m²
on a chose location in Amsterdam

What is the role of the library in the 21st century?

Who are the users and the client of the building?

What should the building offer to the users?

How does the building intervene with the city?

Research methods

Analysis of the precedent examples

Research on students and UvA

Analysis of the program

Urban analysis of city and location

- What is the role of the library in the 21st century?
- Who are the users and the client of the building?
- What should the building offer to the users?
- How does the building intervene with the city?

17TH - 18TH century

Temple of Knowledge

Central - Linear typology

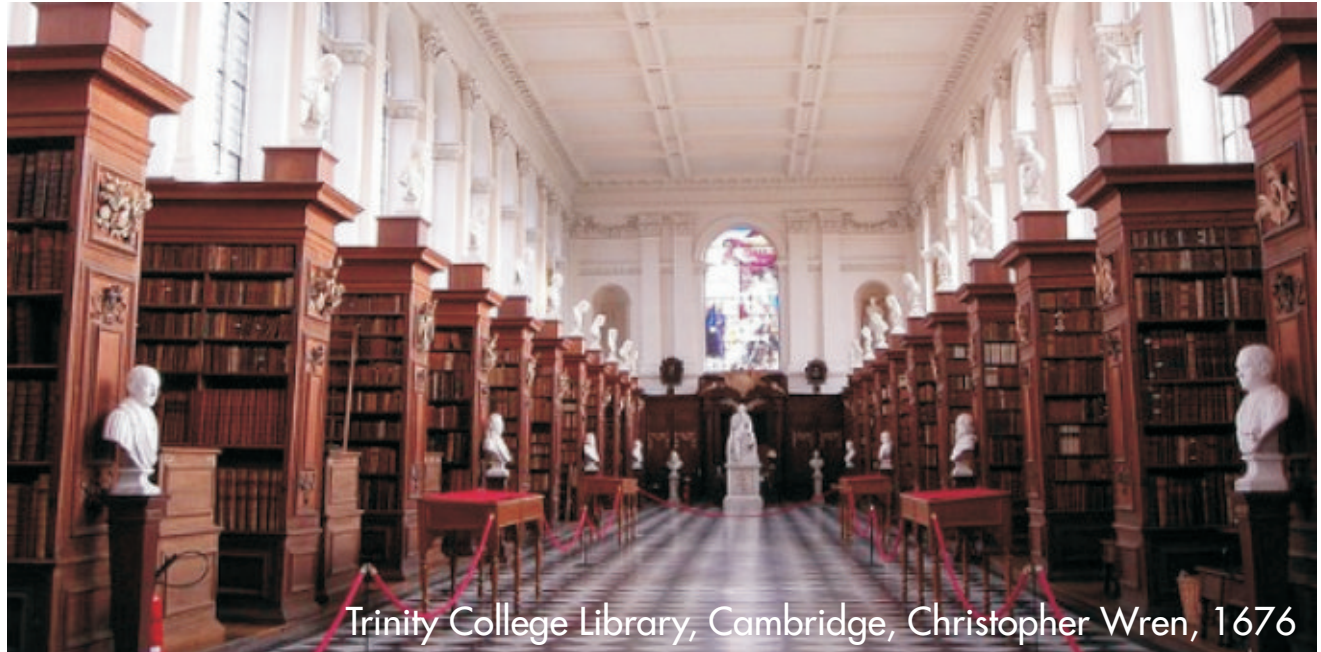
Domination of books

Addition of art pieces

Closed privileged user group

No study spaces

Typology studies



19th century

Primary source of information
in education

Study spaces within collection
Reading rooms

Larger - diverse user group



St. Genevieve Library, Paris, Henri Labrouste, 1850

Typology studies

20th century

Open plan typologies

Study spaces without books

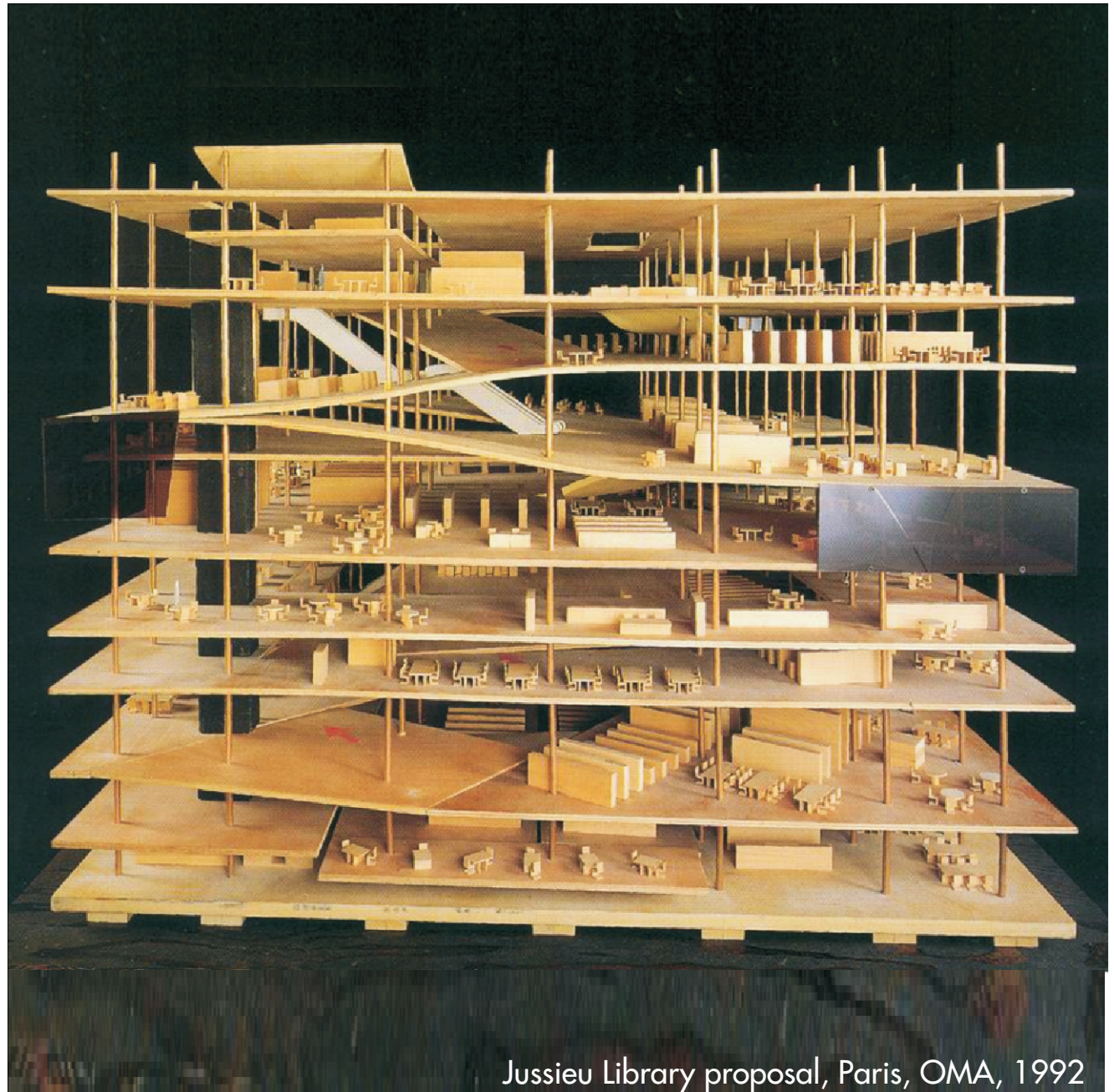
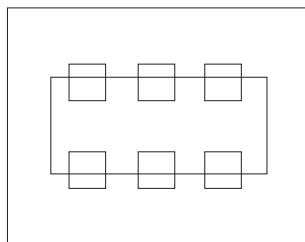
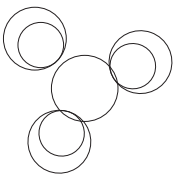
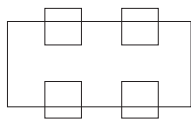
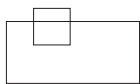
Enlarging of the storage areas

Important part of the University

Additional functions and services

More staff members

Diversity of study spaces



Jussieu Library proposal, Paris, OMA, 1992

Typology studies

21st century

Digitalization

Learning Center and Book depot

Openness and collectivity

Study environment with rules

New study patterns



Rolex Learning Center, Laussane, SANAA, 2010



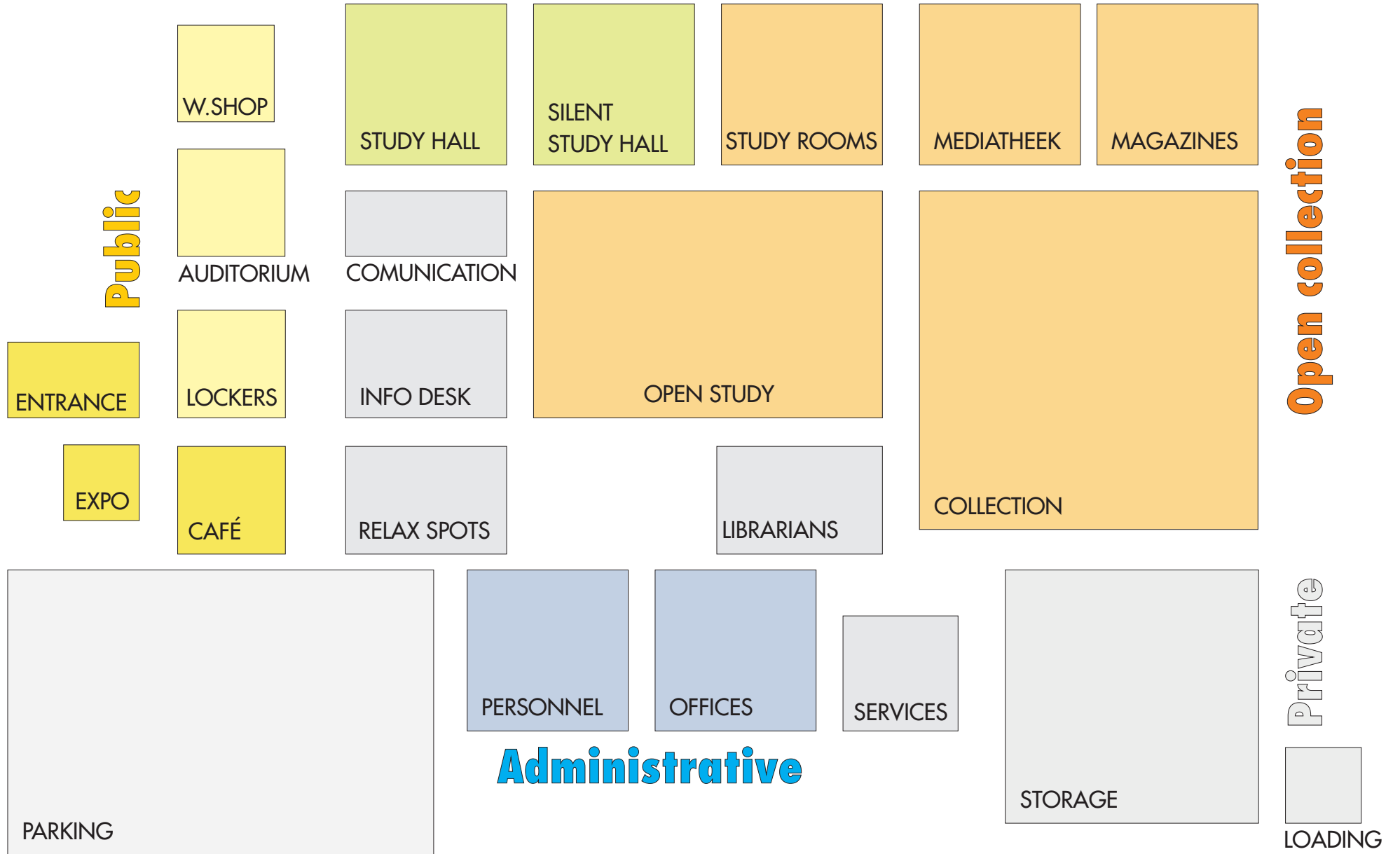
Typology studies



Book pick-up room, OBA, Amsterdam, 2007

23.000m²

Learning center



Program sections

New Library for Uva

Destination for students, Center of Knowledge

Collectivity and Openness

Common meeting place for all UvA students

Guarantee of a good study environment with diversity of study spots

Institutional character - representative value for UvA

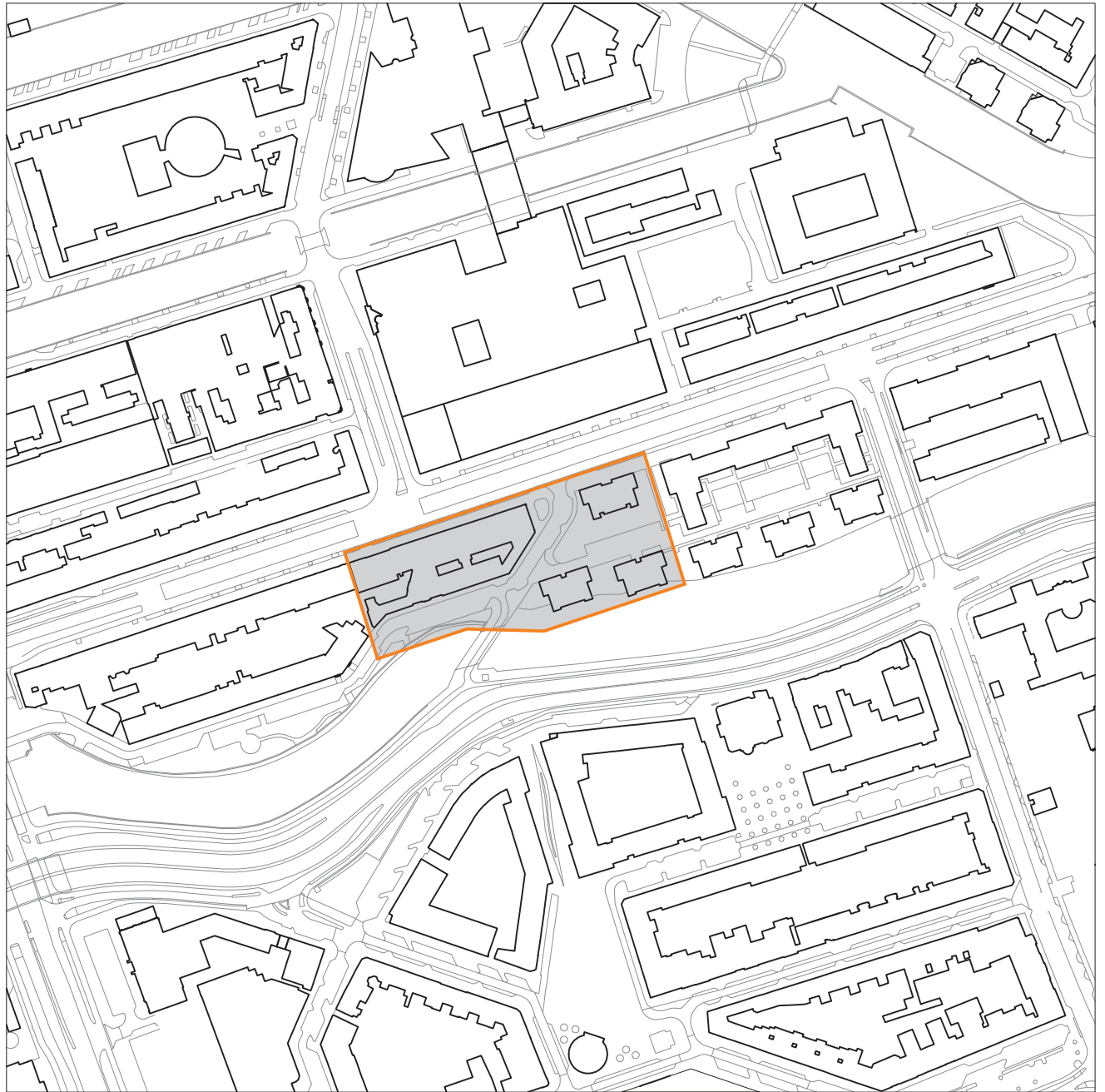
Accommodating required program - clear and functional distribution

Multi faced building - public and private sectors

Design aims



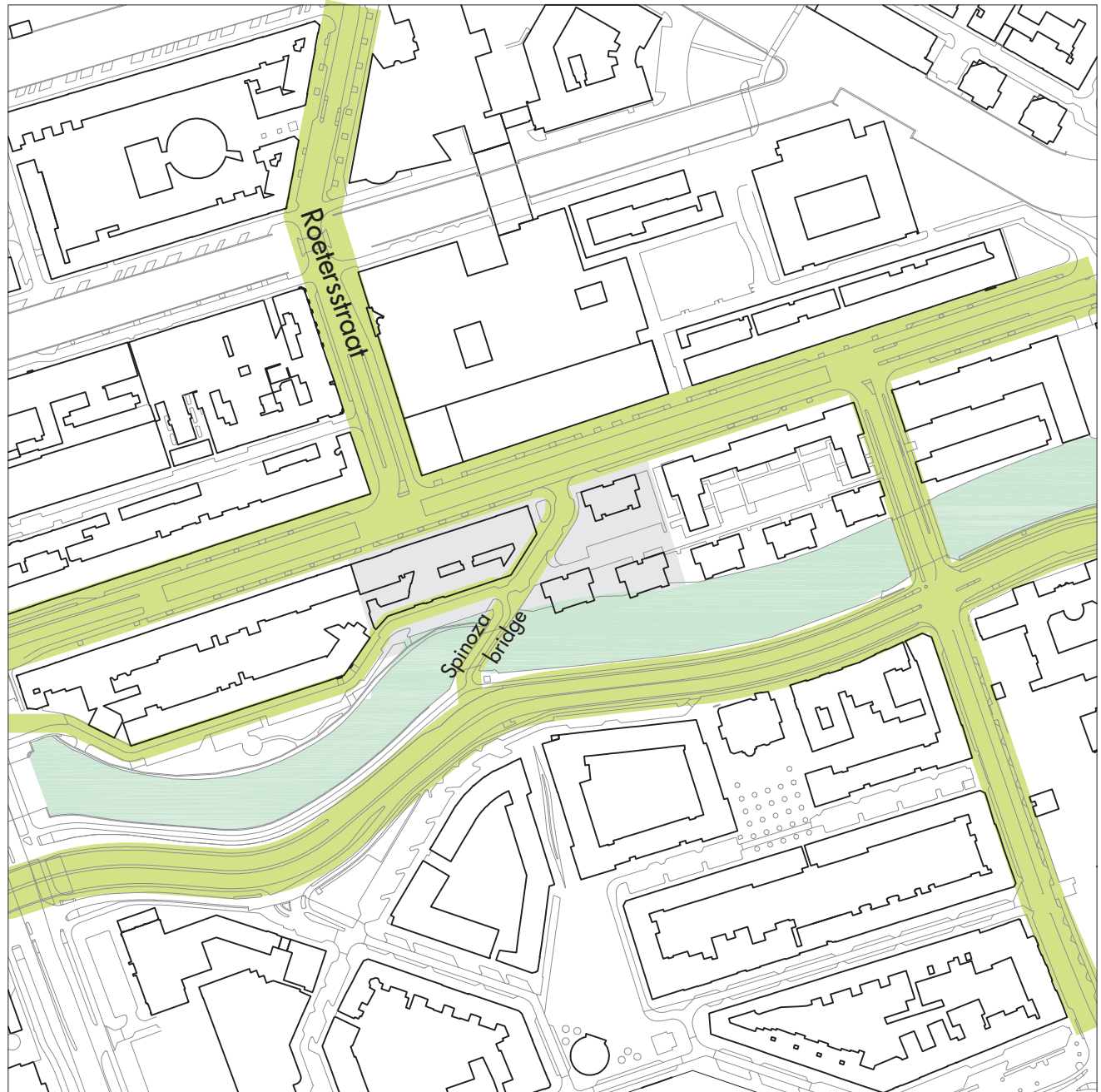
Urban analysis - Amsterdam



Urban analysis - Location

ROUTING

Sarphatistraat
Spinoza straat
Singelgracht
Mauritskade



Urban analysis - Location



Sarphatistraat



Singel gracht



Spinoza bridge



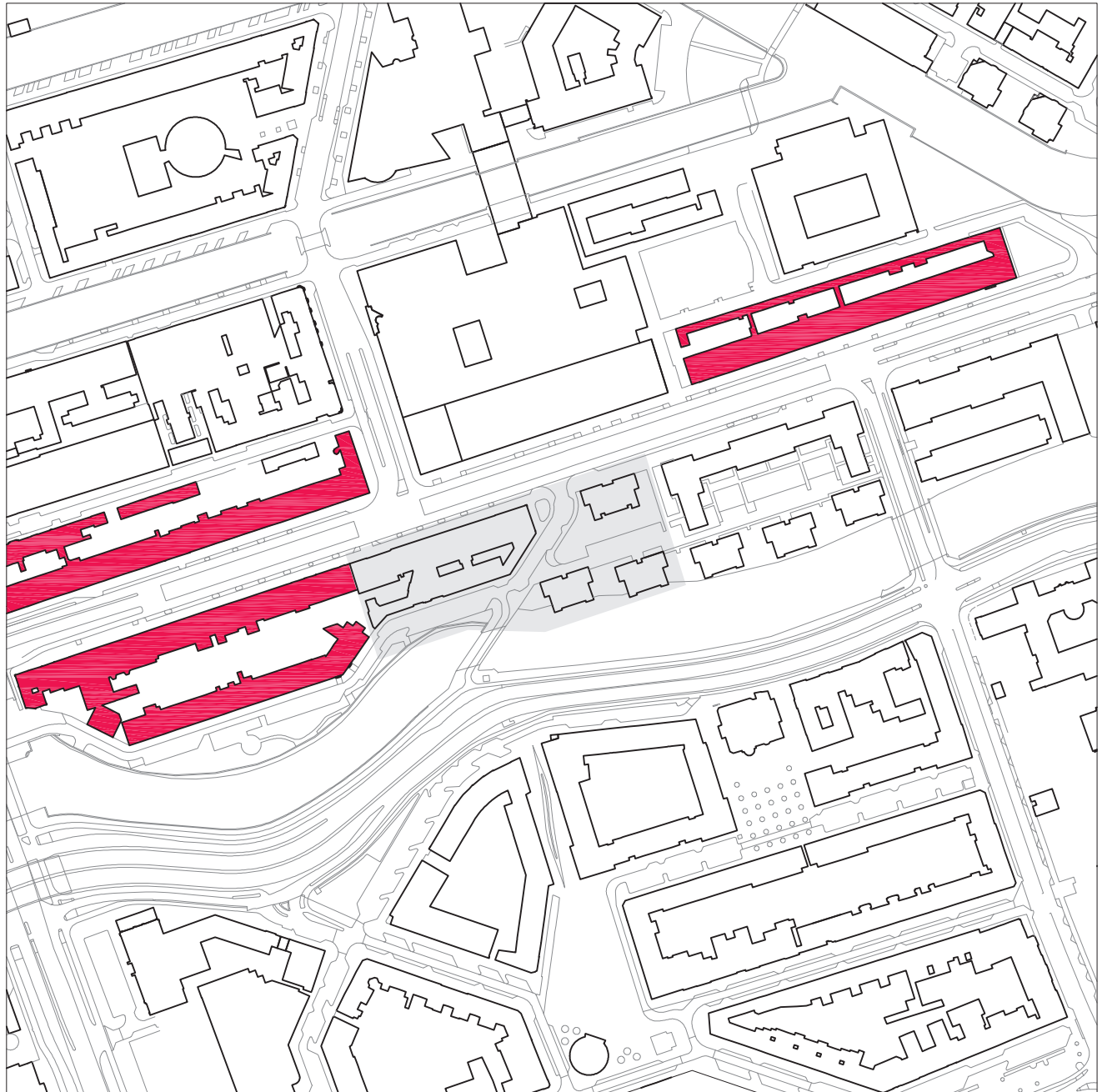
Roetersstraat

SURROUNDINGS



 Row housing

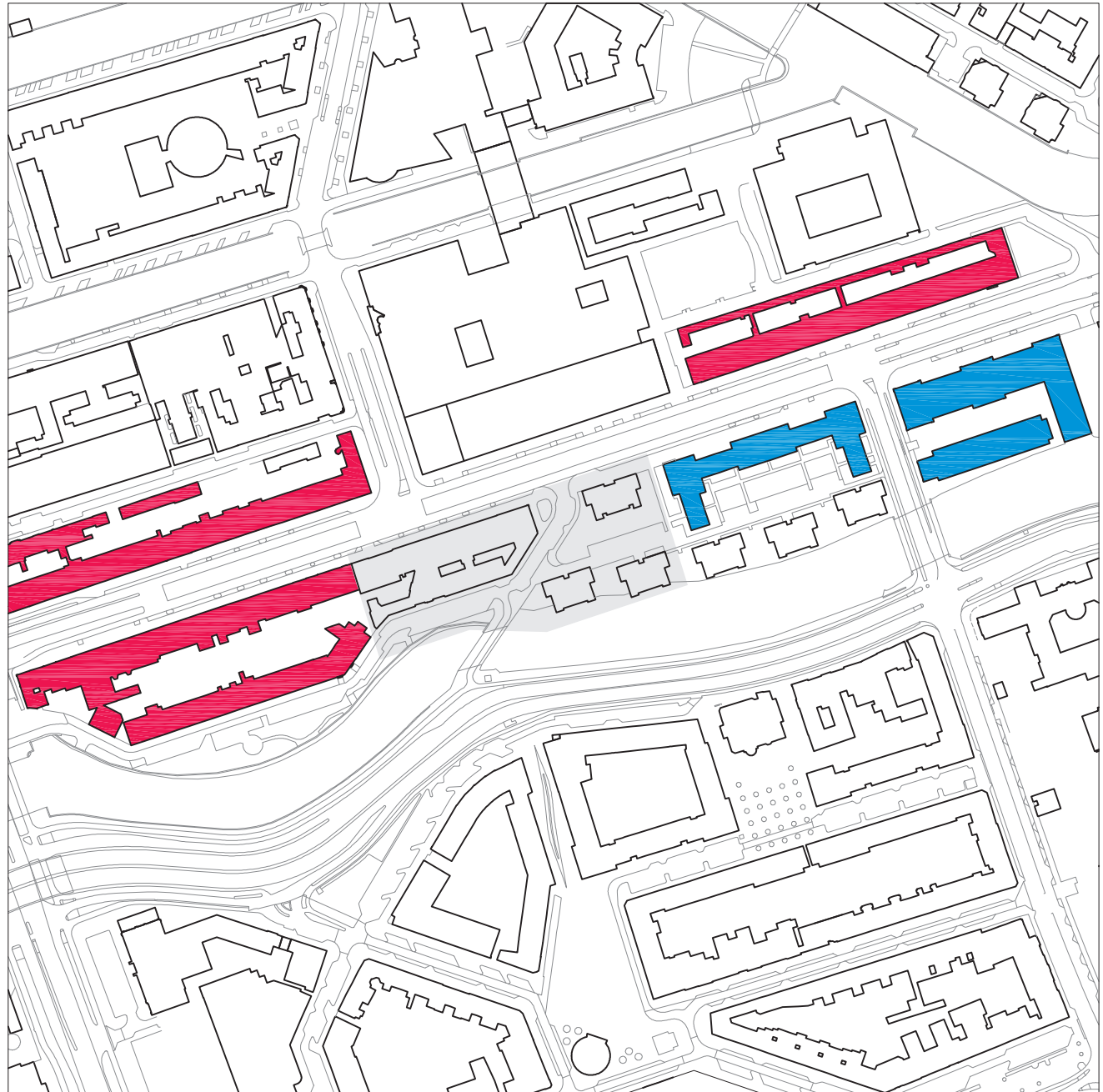


Urban analysis




SURROUNDINGS

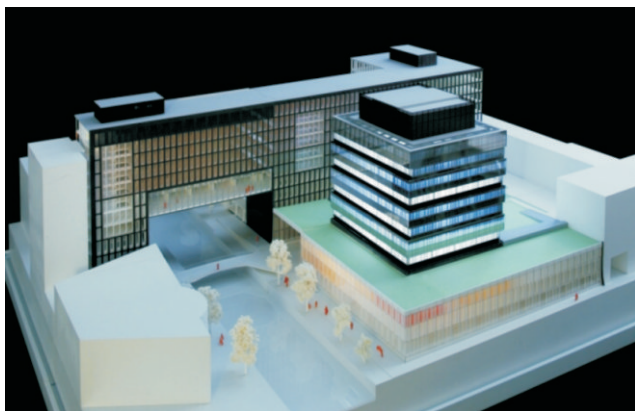
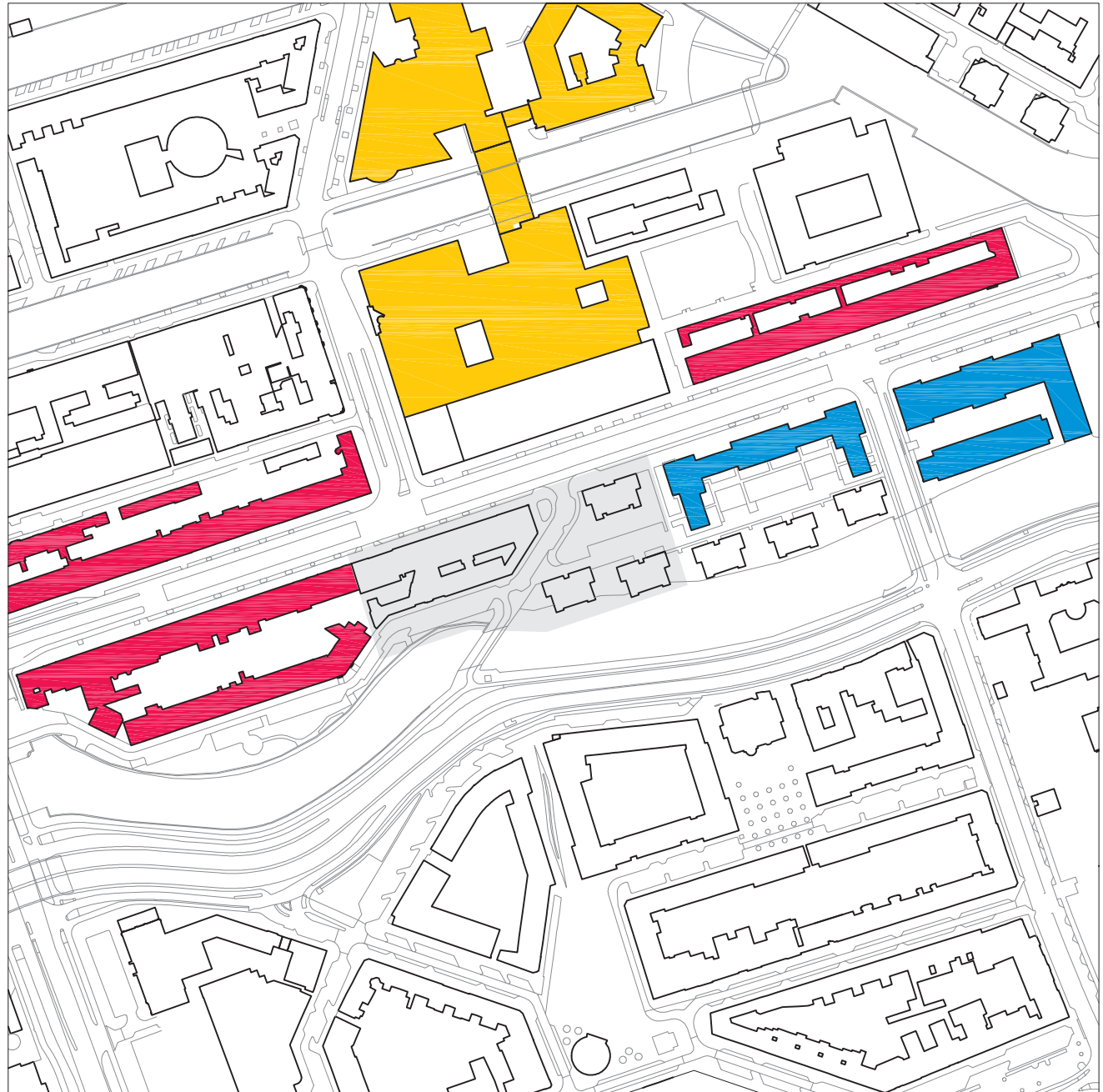
-  Row housing
-  19.century military buildings



Urban analysis





SURROUNDINGS

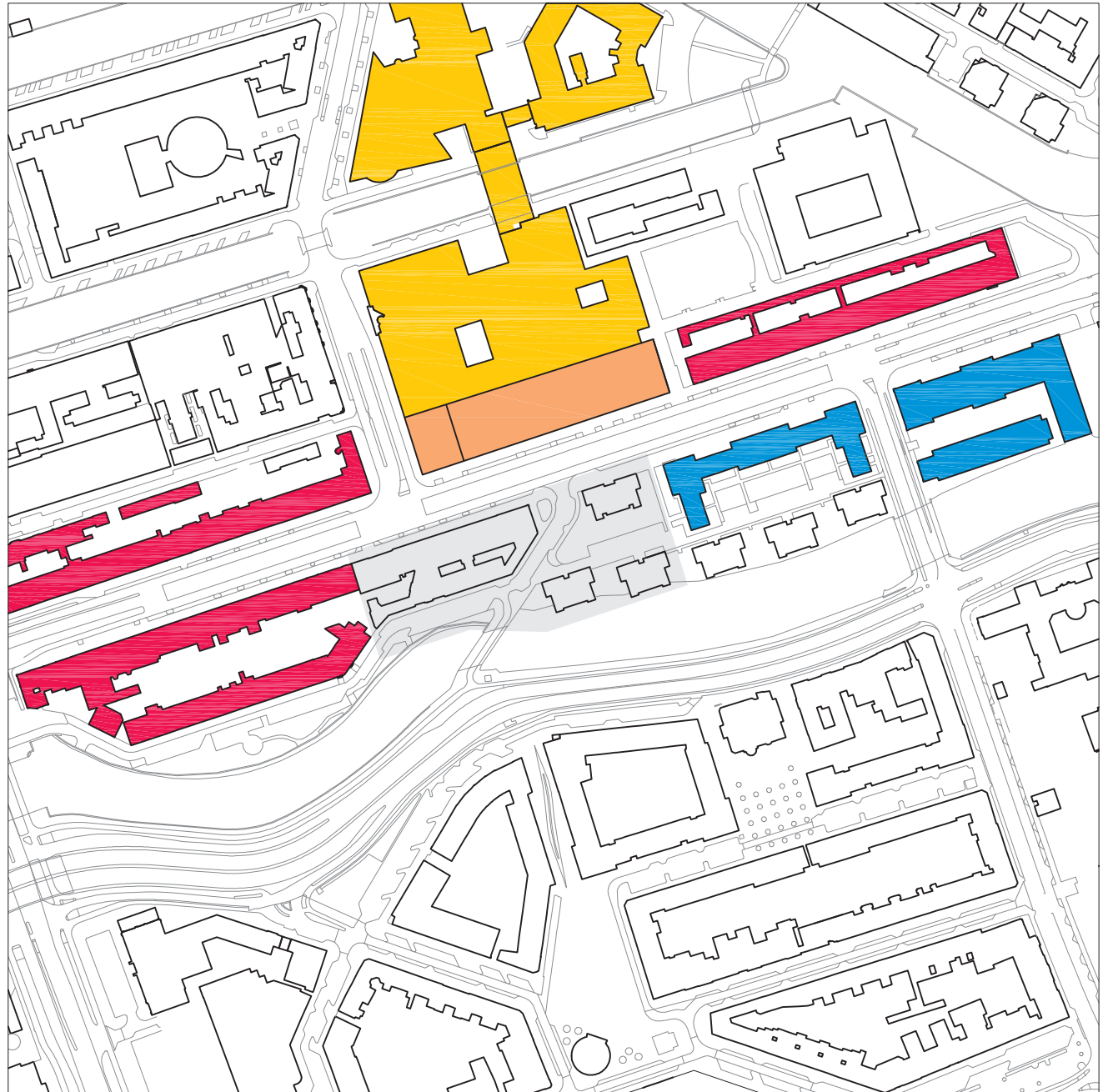
-  Row housing
-  19.century military buildings
-  UvA - Roeterseiland



Urban analysis






SURROUNDINGS

-  Row housing
-  19.century military buildings
-  UvA - Roeterseiland
-  Student housing



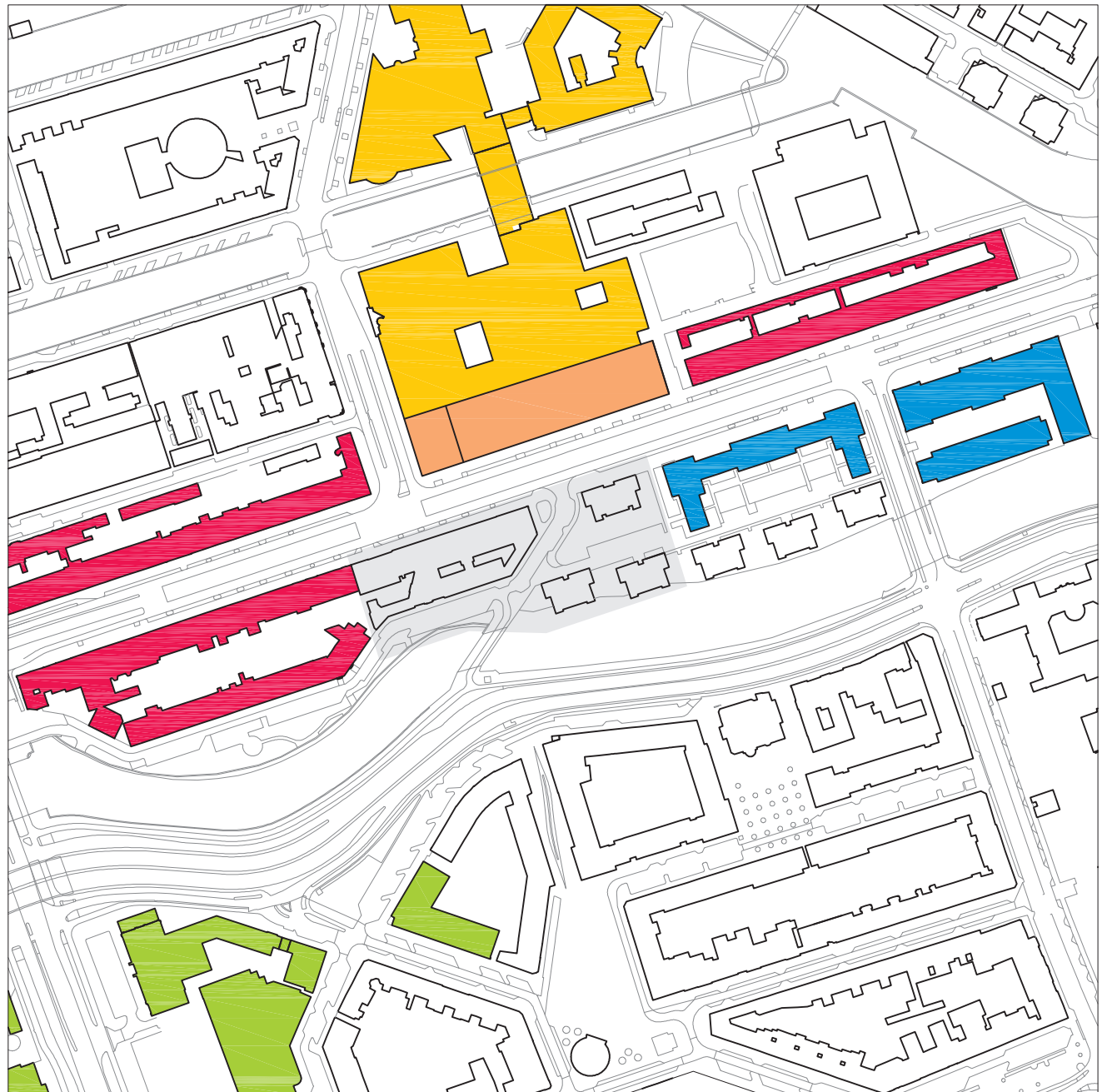
Urban analysis

SURROUNDINGS







-  Row housing
-  19.century military buildings
-  UvA - Roeterseiland
-  Student housing
-  HvA - Amstel campus



Urban analysis

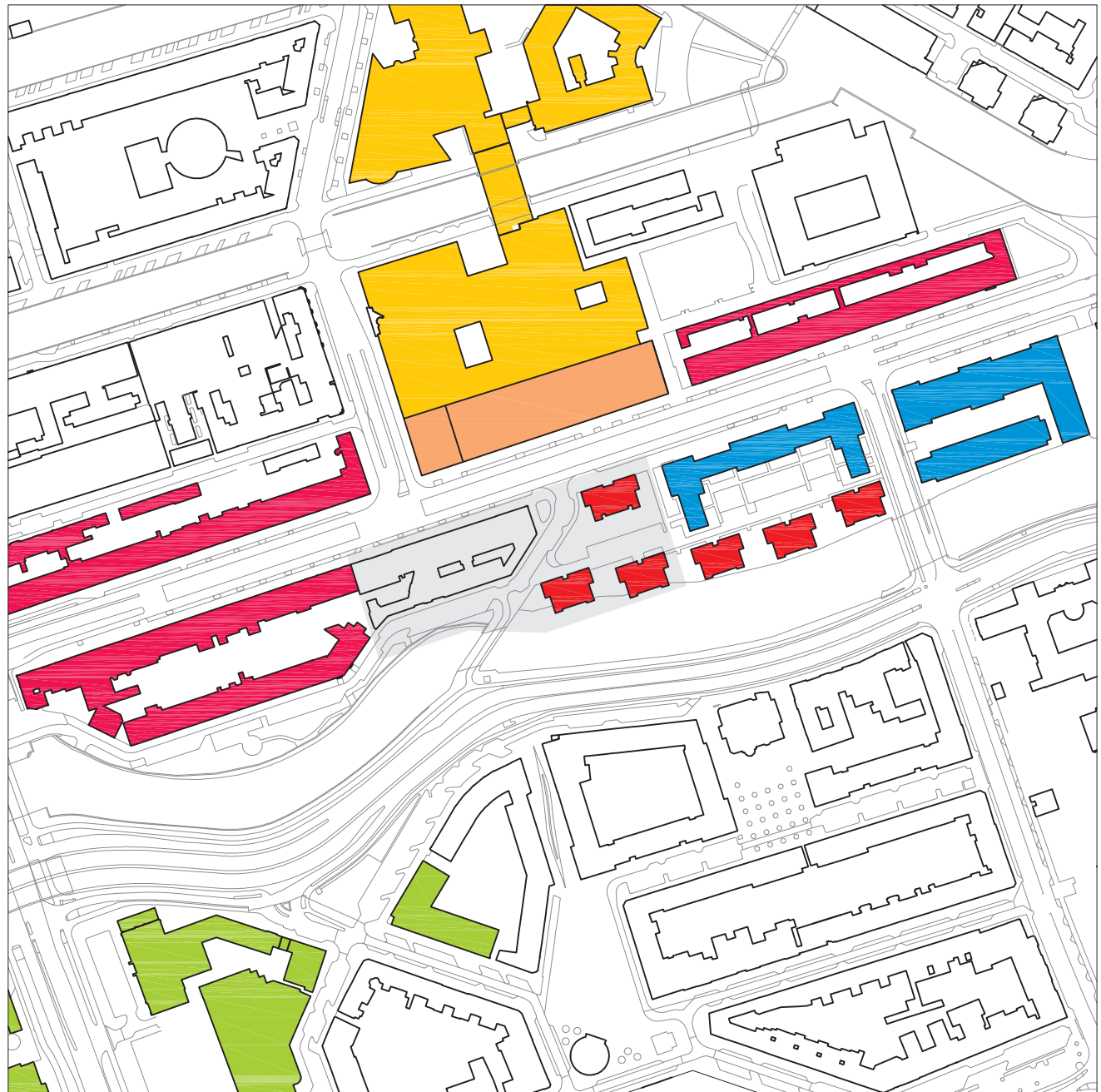


SURROUNDINGS








-  Row housing
-  19. century military buildings
-  UvA - Roeterseiland
-  Student housing
-  HvA - Amstel campus
-  Apartment blocks



Urban analysis

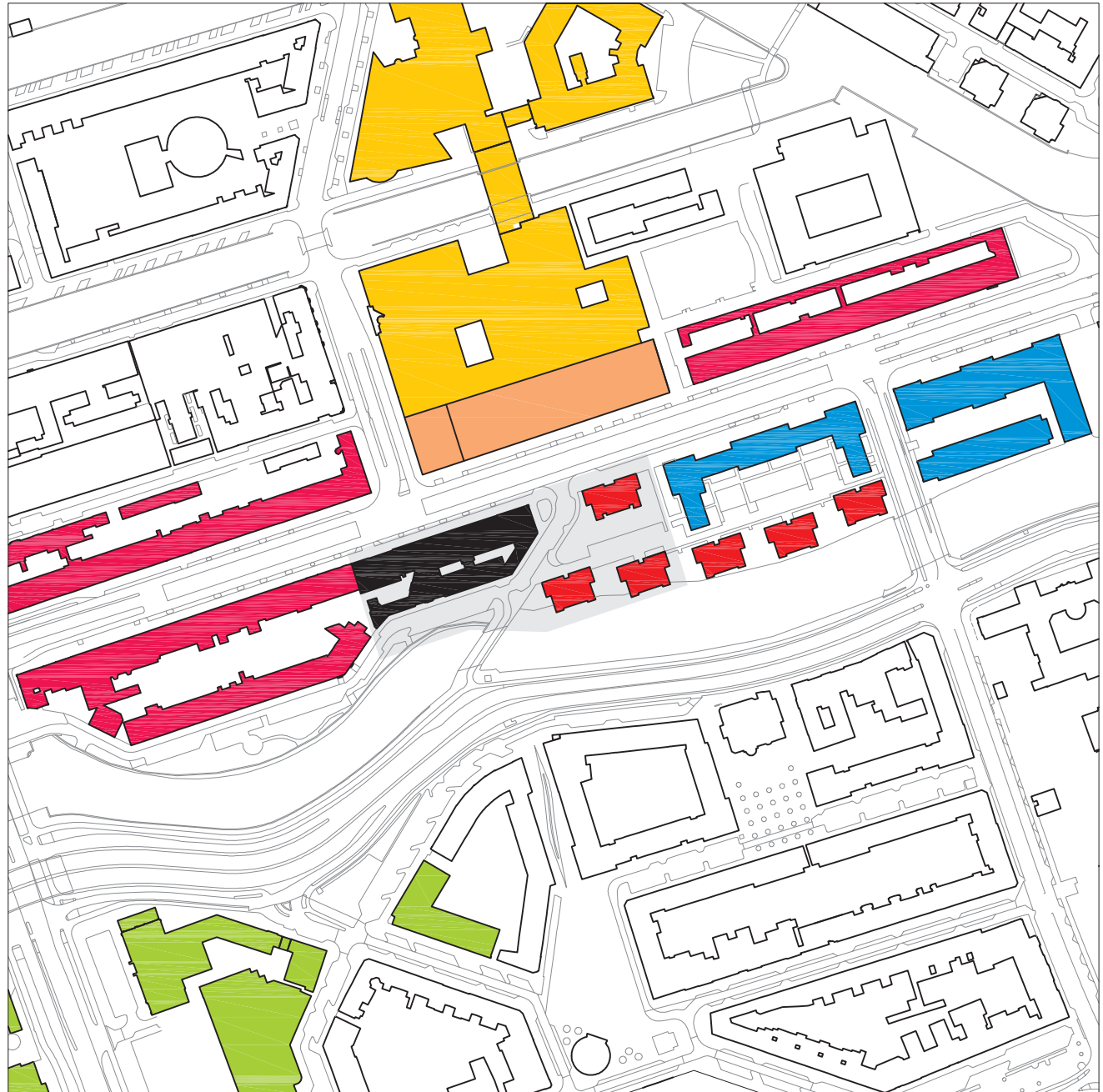


SURROUNDINGS

-  Row housing
-  19.century military buildings
-  UvA - Roeterseiland
-  Student housing
-  HvA - Amstel campus
-  Apartment blocks
-  Abandoned buildings



Urban analysis





Urban strategy



Urban strategy - Extension of UvA campus



Urban strategy - Connecting UvA and Hva

Library on the location

Extention of the Roeterseiland campus to the watersite

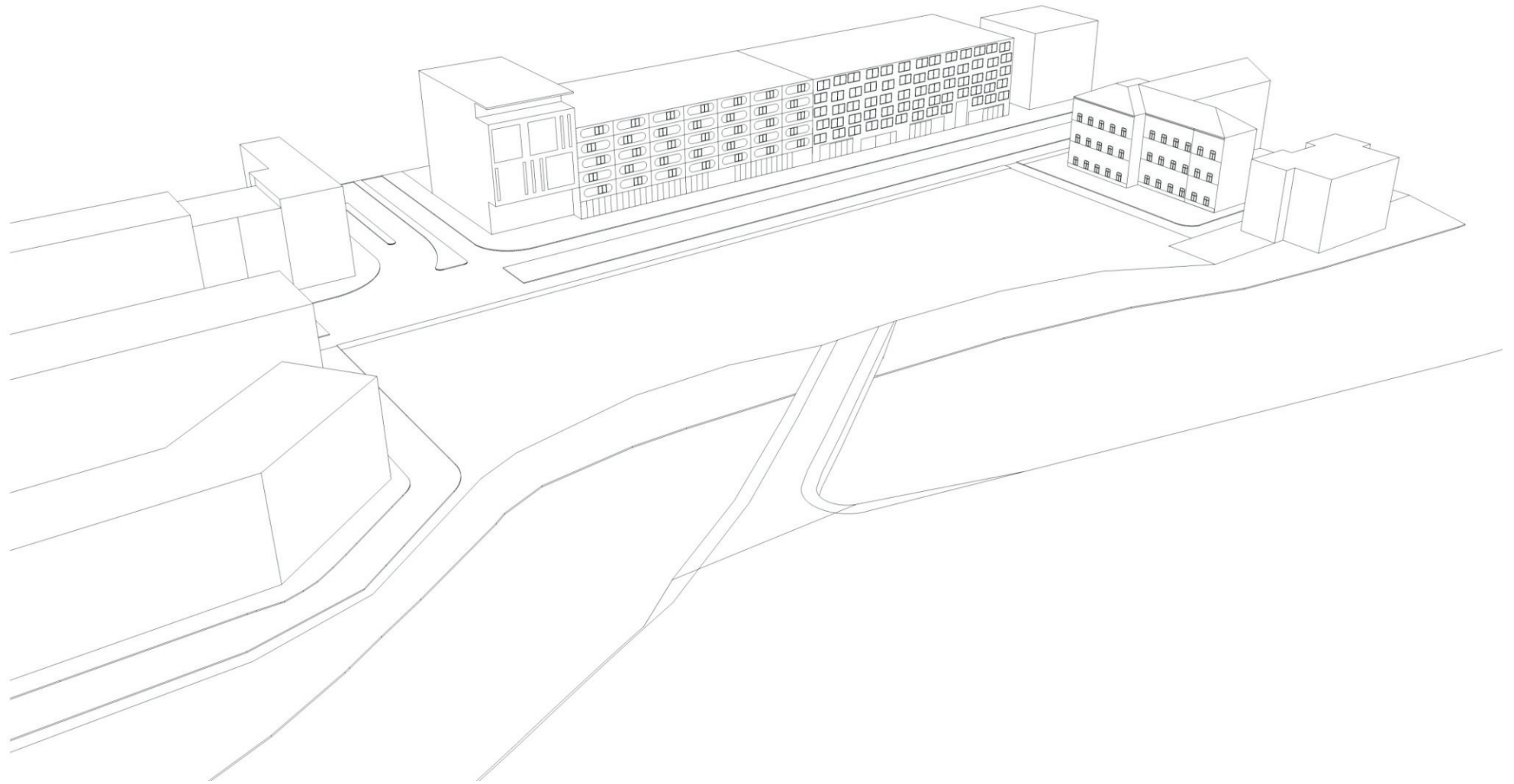
Connection point of UvA and HvA - meeting place for students

Solution which responds to the diverse surroundings

Orientation point on Sarphatistraat boulevard, proper ending to Roetersstraat

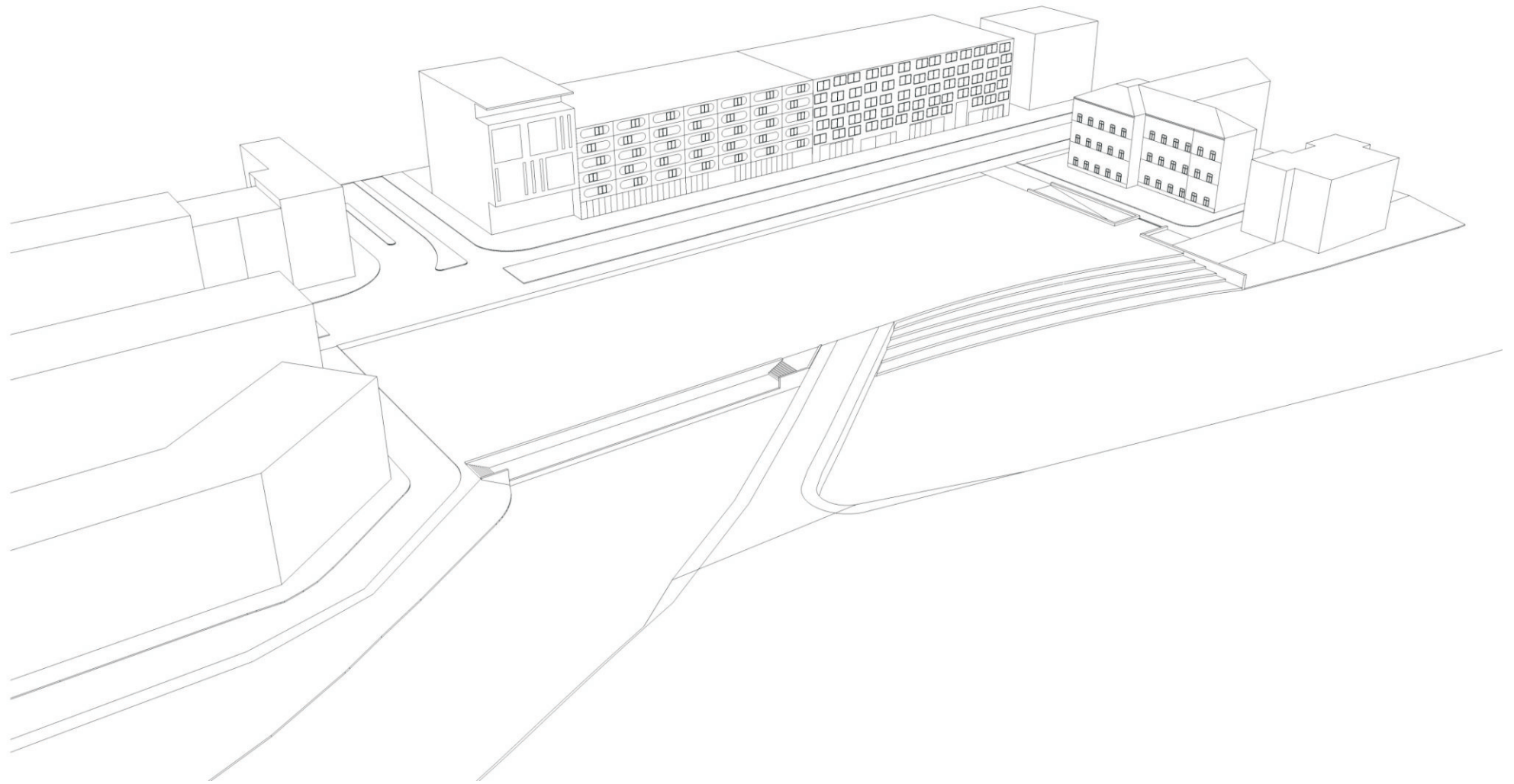
Landmark which contrubites to the public life of the neighbourhood

Design aims



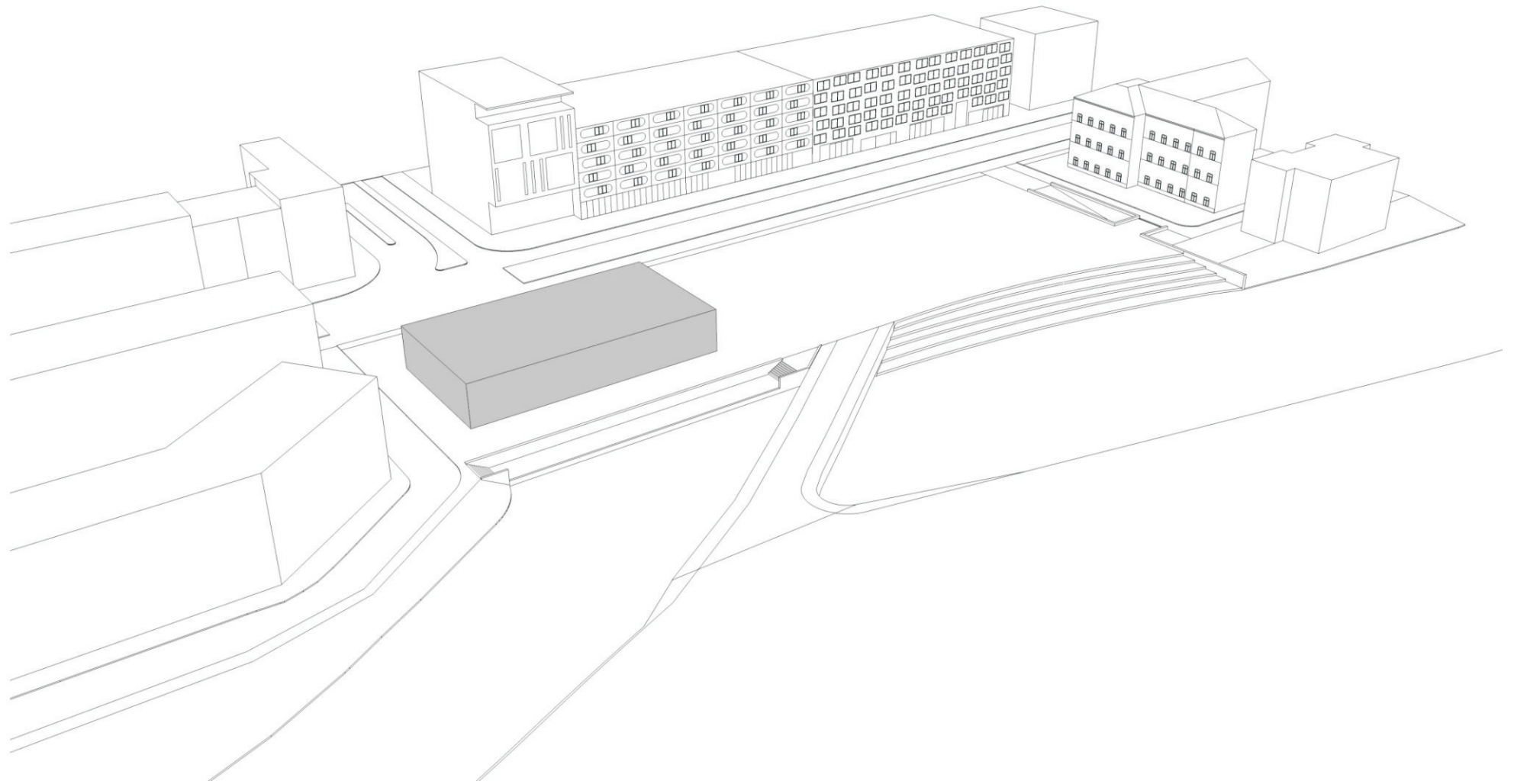
Design concept

Removal of the existing buildings



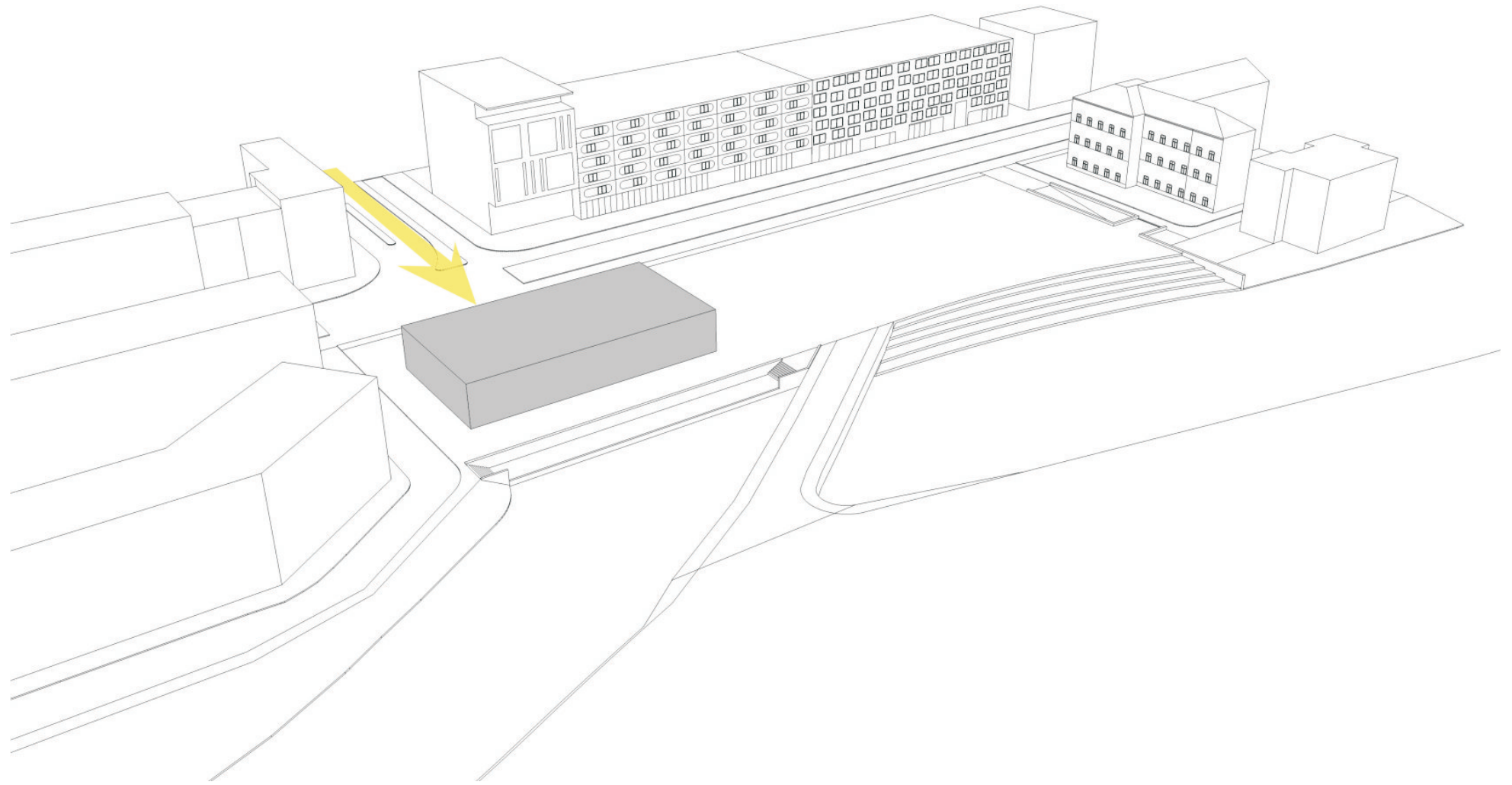
Reclaim of the waterside - port, urban beach

Design concept



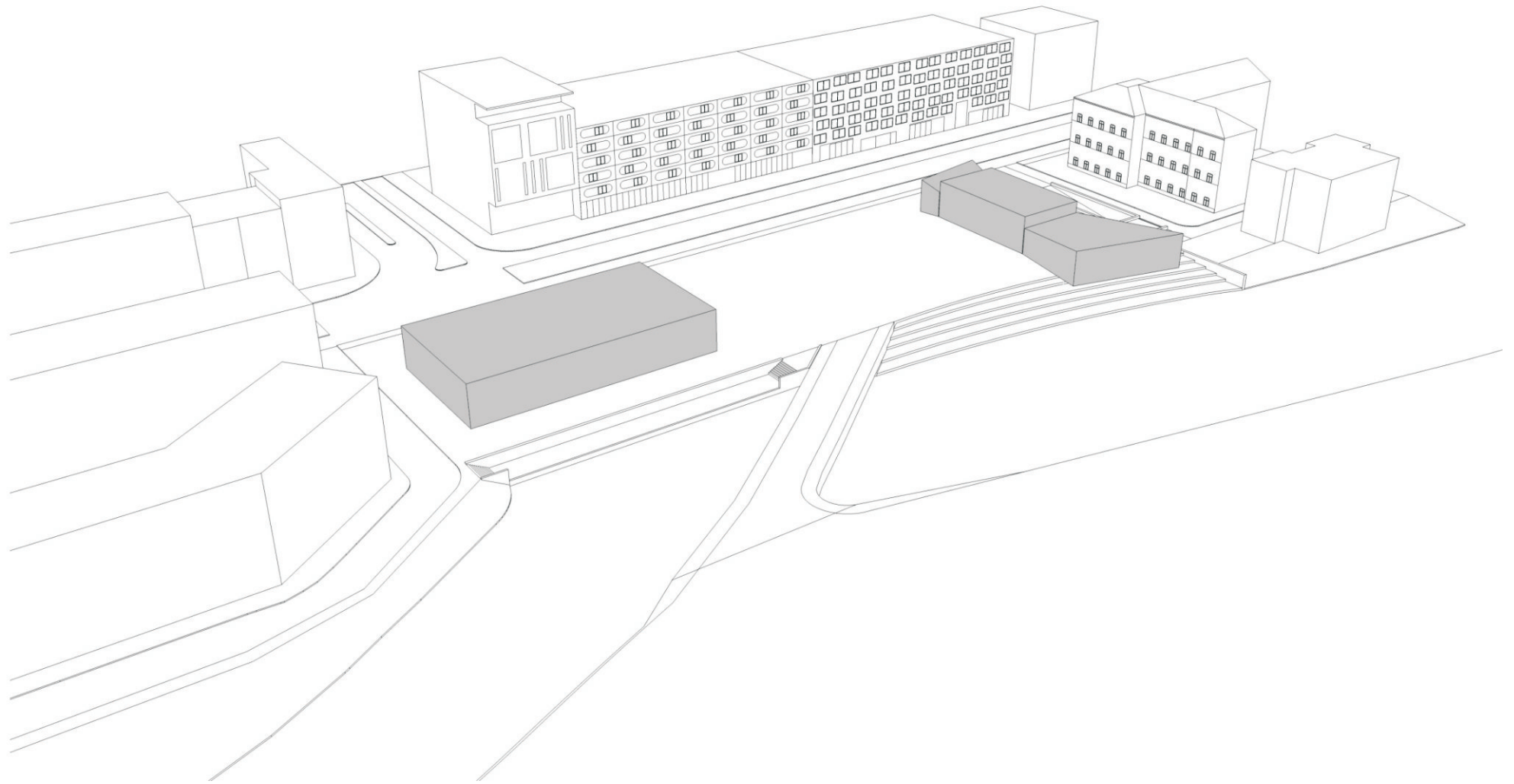
Main pavilion - Entrance to the building

Design concept



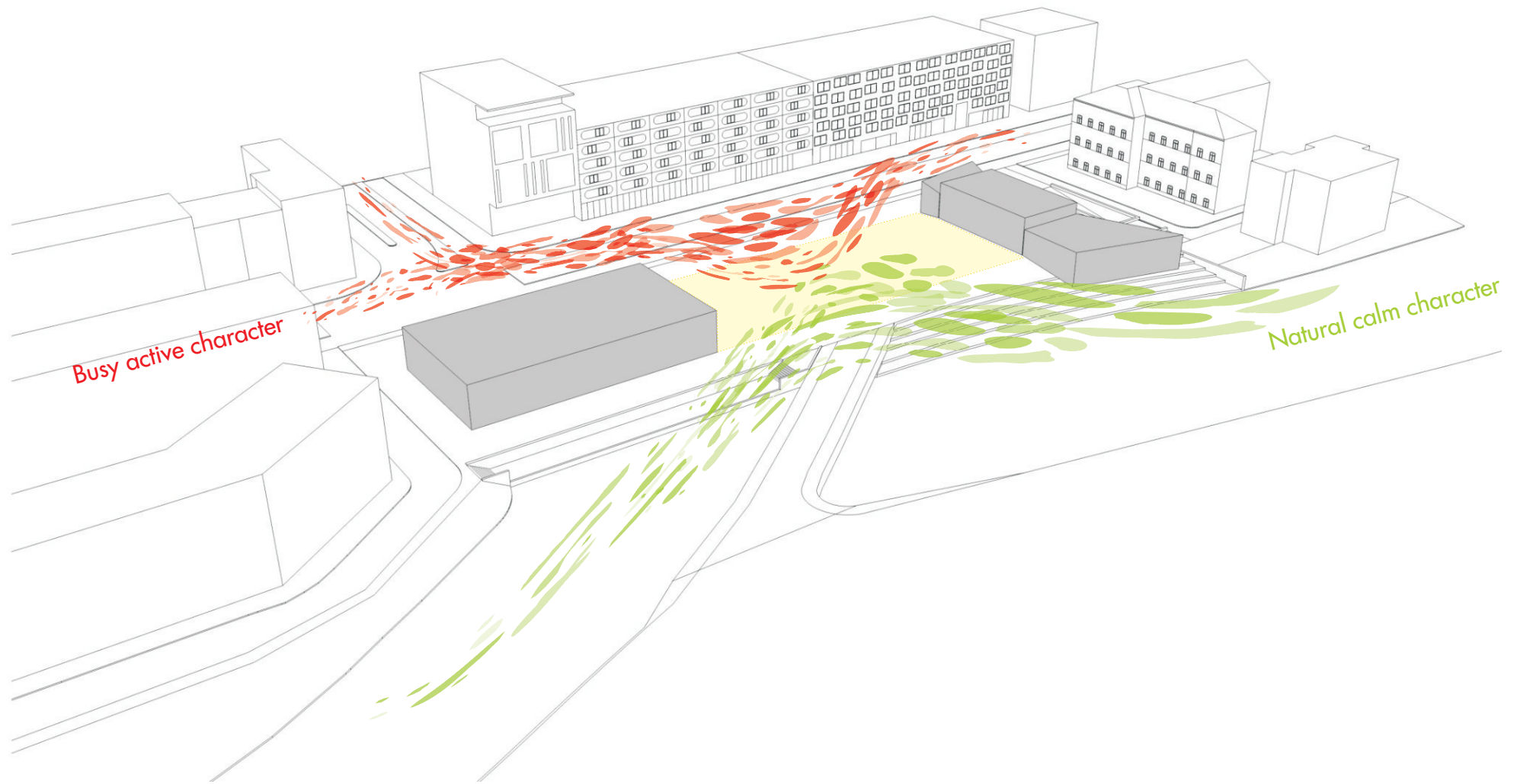
Positioned on the axis of Roetersstraat

Design concept



Second pavilion - public functions for the beach and street

Design concept

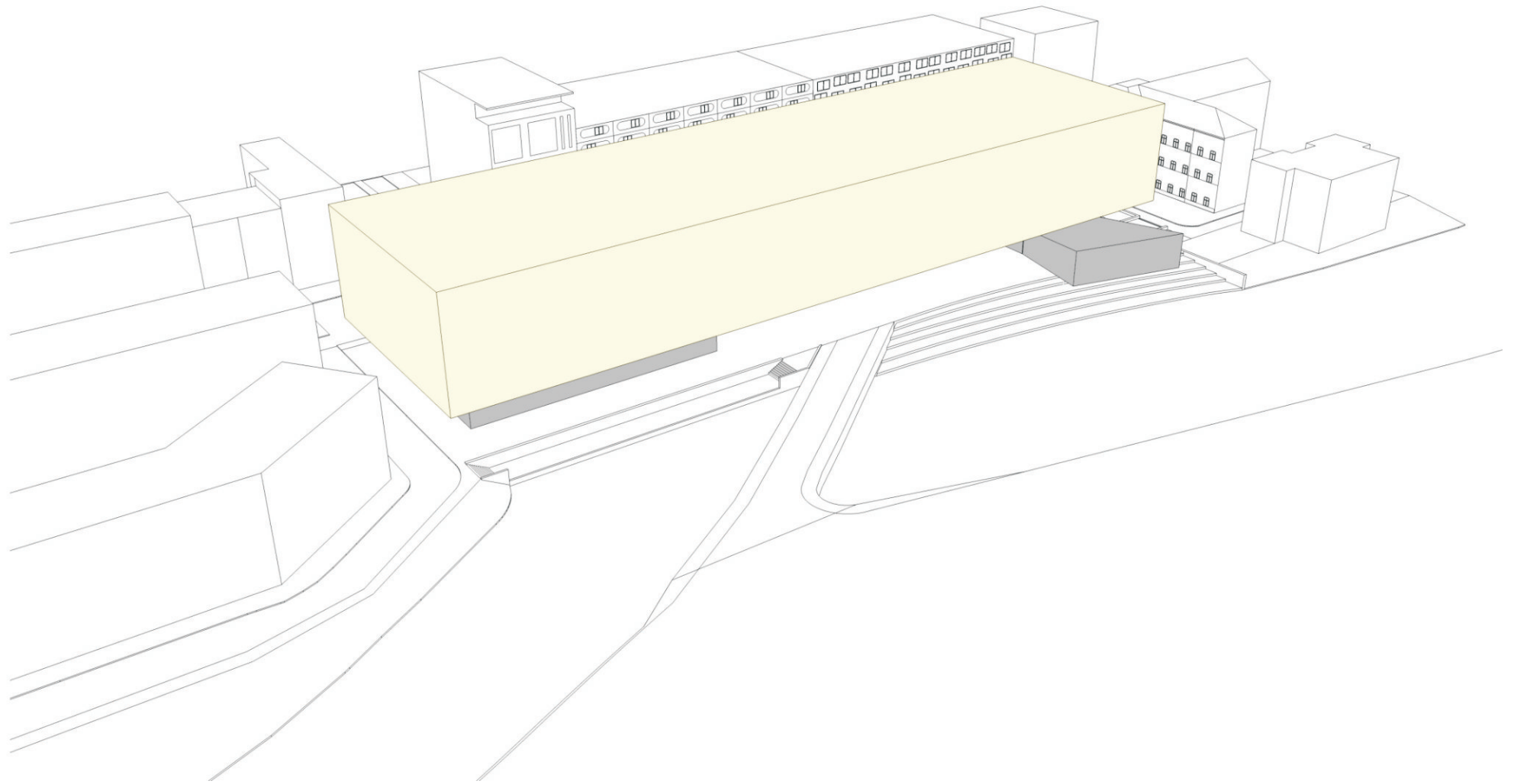


Busy active character

Natural calm character

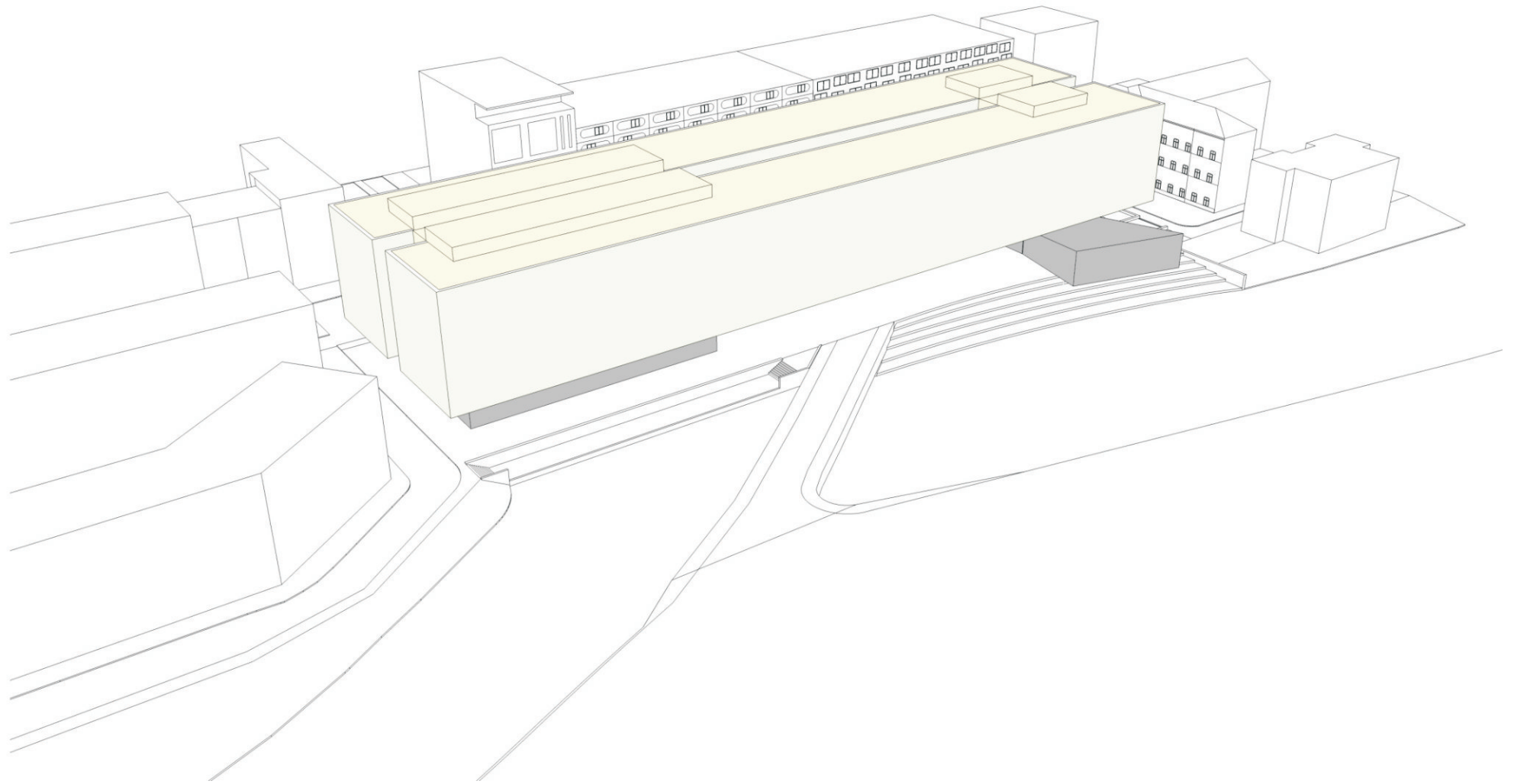
Public groundfloor space - connections and meetings

Design concept



Library - volume elevated above the square

Design concept



Design concept

Volume shaping - Spine of light



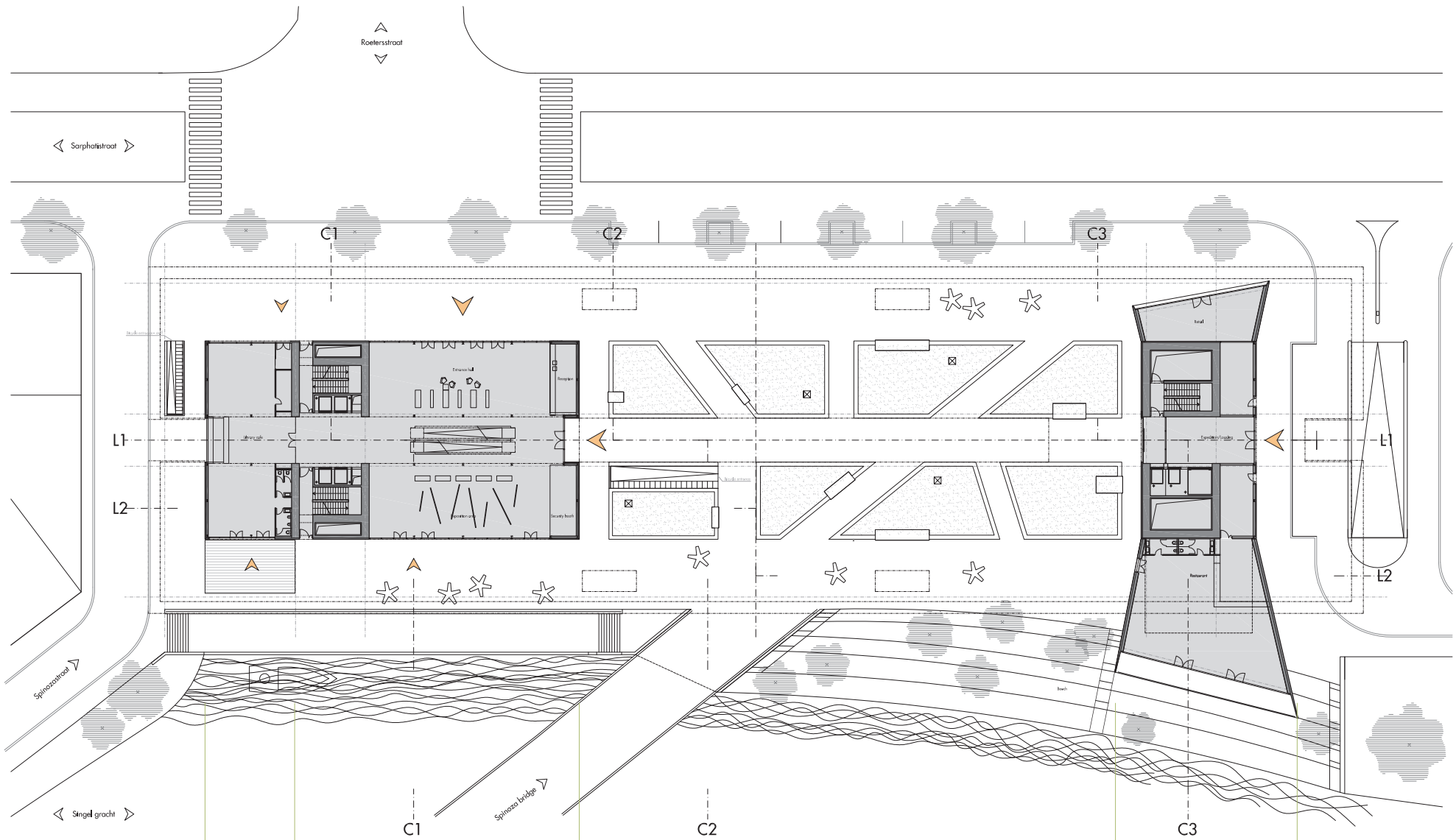
Street view from Mauritskade



Street view of Sarphatistraat



Street view from Roetersstraat



CAFE

ENTRANCE HALL

LIBRARY SQUARE

RETAIL
RESTAURANT

SERVICE
ENTRANCE

Ground floor - Public space



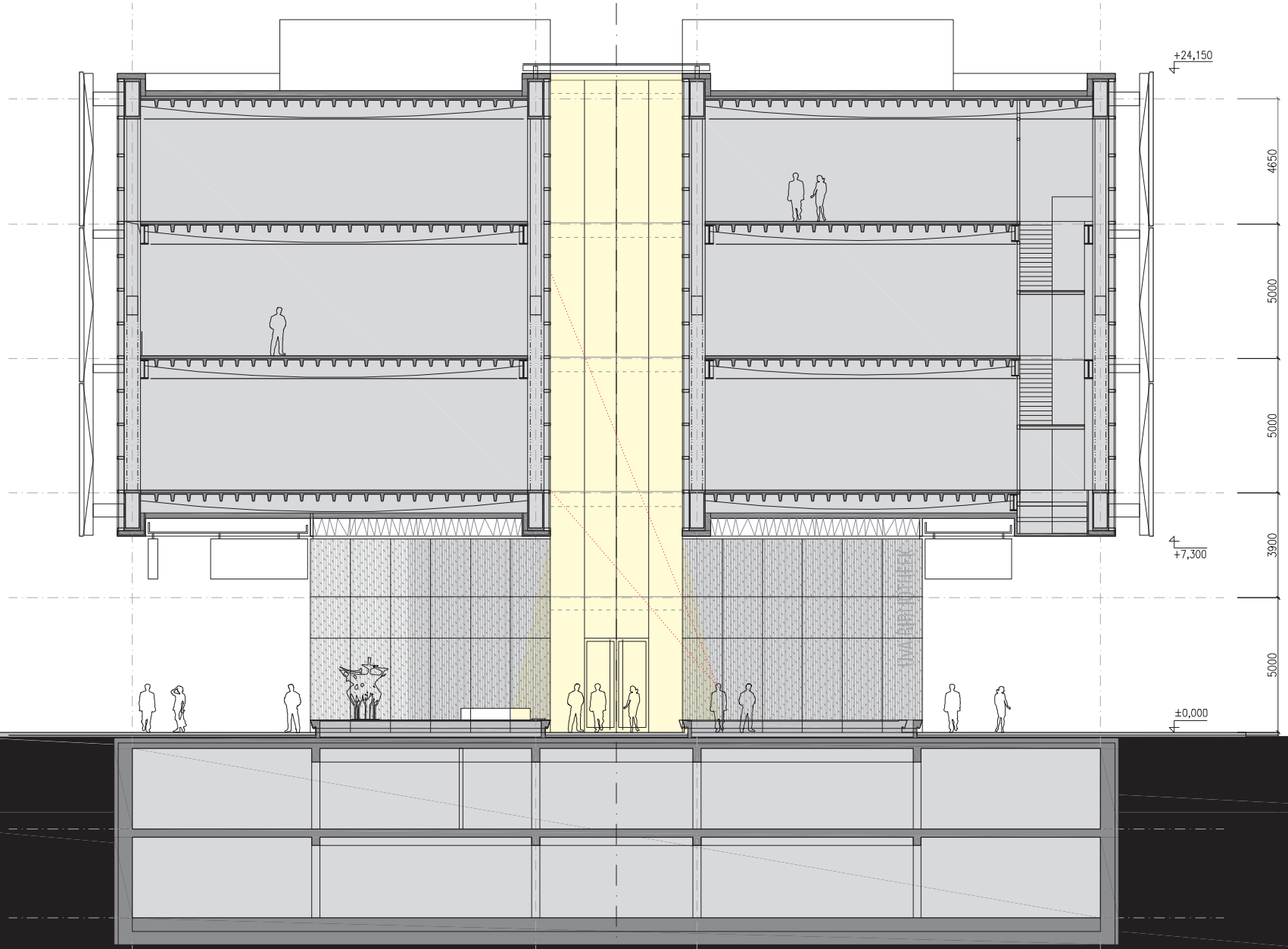
Ground floor - Pavilions



Ground floor - Library square

SOUTH

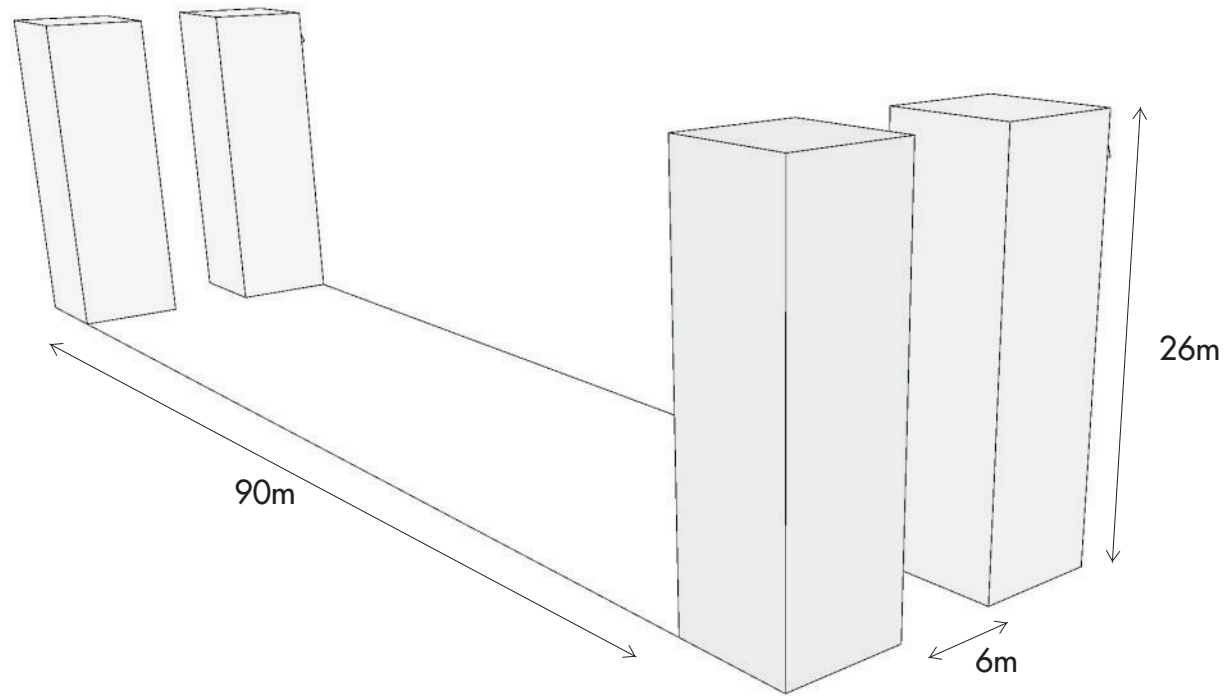
NORTH



Atrium

Spine of the building
Atrium



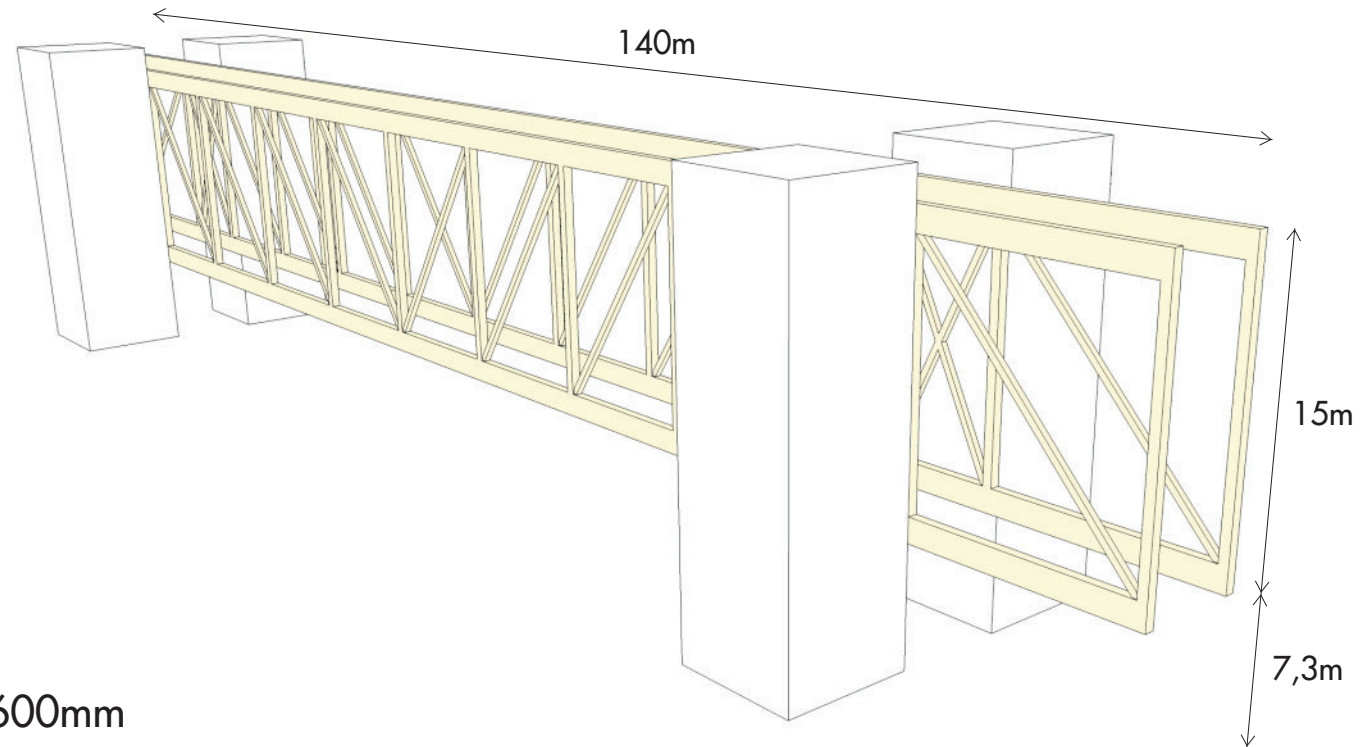


Concrete cores

span distance - 90m
8x8m, 900mm thick walls

Vertical communications
Service lines

Structure



Inner steel trusses

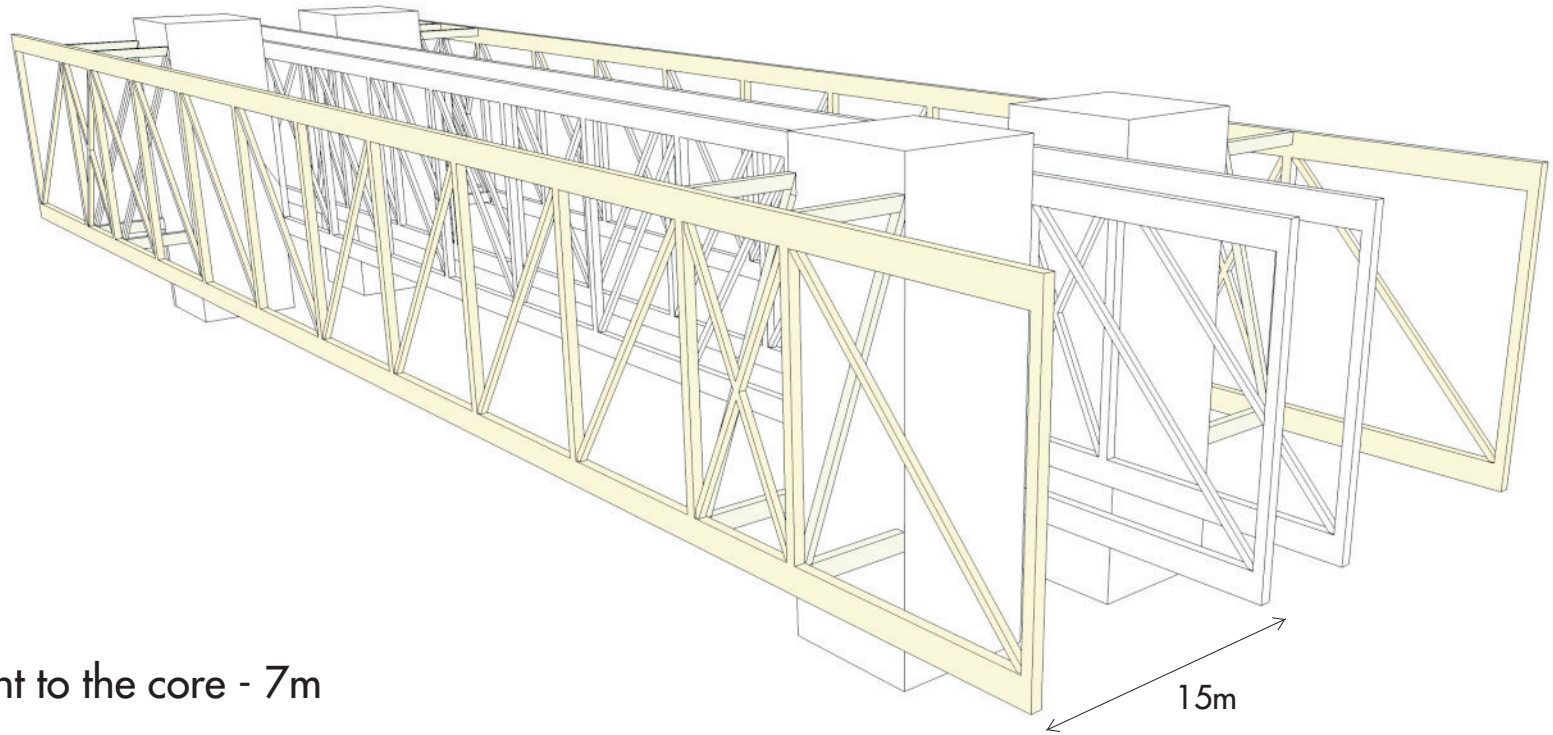
$L = 140\text{m}$, $H = 15\text{m}$, $D = 600\text{mm}$

Module = $11,2\text{m}$

Symmetrical placement

Atrium

Structure



Outer steel trusses

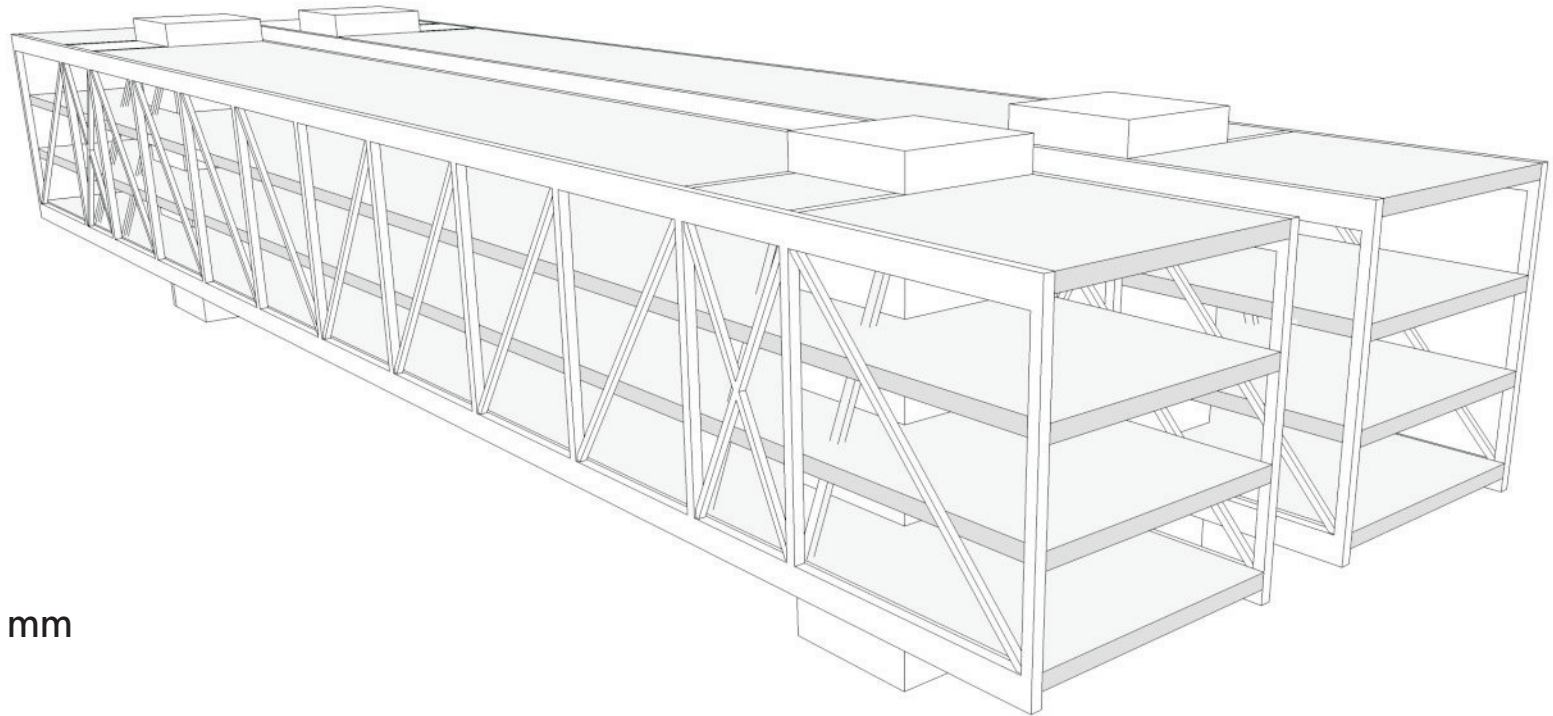
Draw-bar attachment to the core - 7m

$L = 140\text{m}$, $H = 15\text{m}$, $D = 600\text{mm}$

Module = 11,2m

Facade

Structure



Floors and roof

floor height = 5000 mm

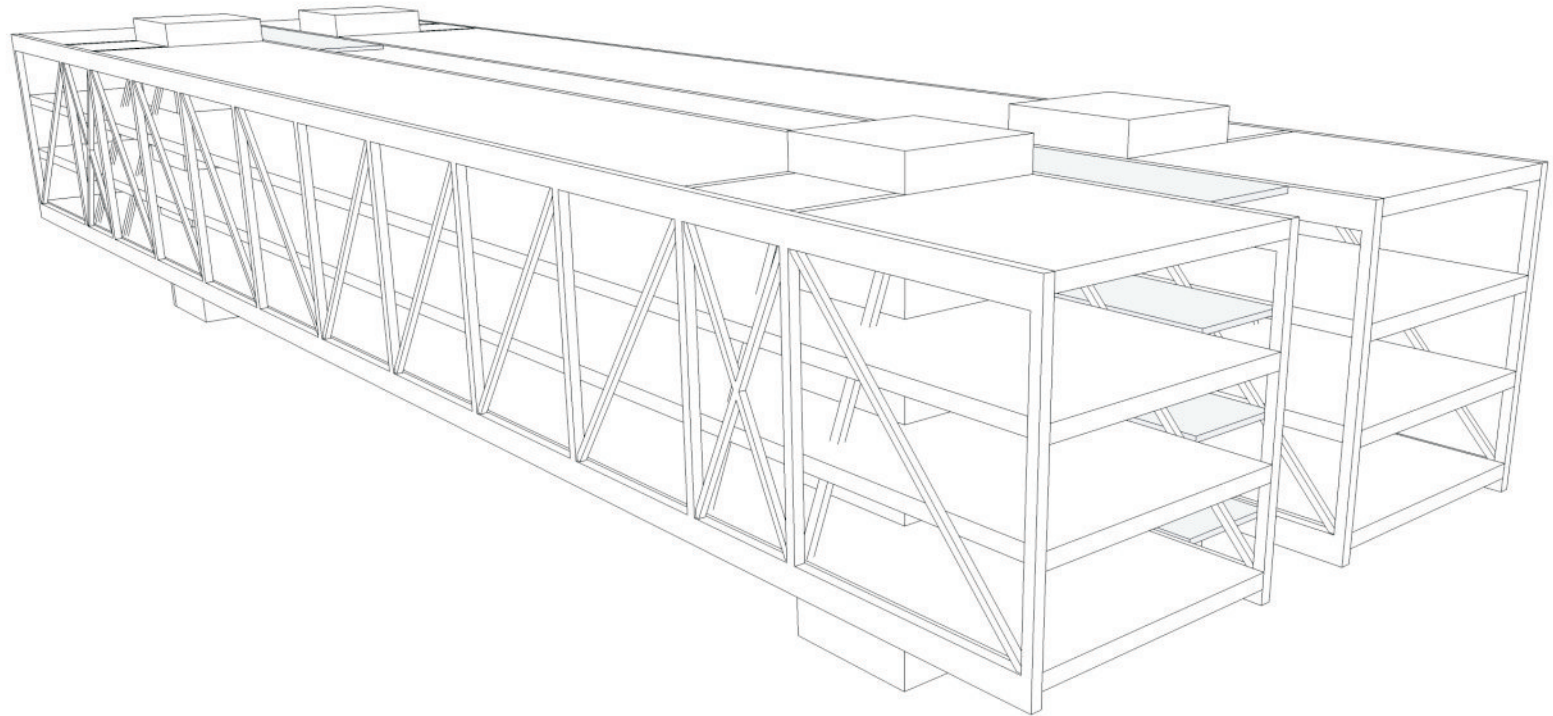
$L = 15\text{m}$

Steel beams $H = 800\text{mm}$

Steel+concrete plates

Library floor

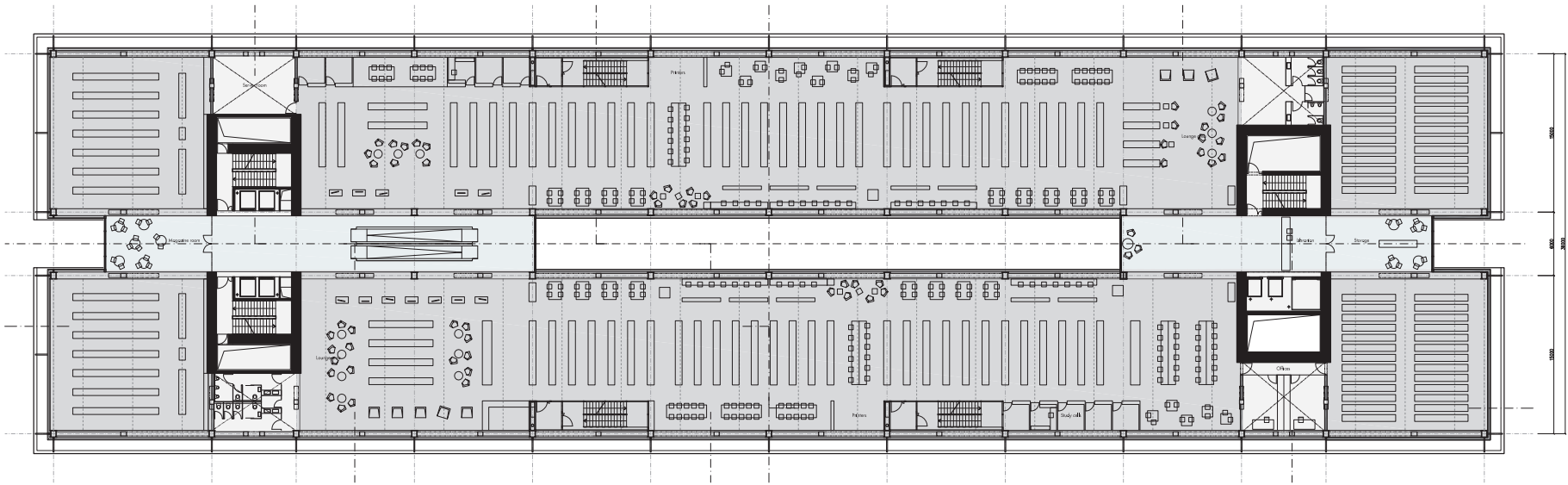
Structure



Connections through the central gap
positioned at the cores - communication spaces

Steel and glass structure

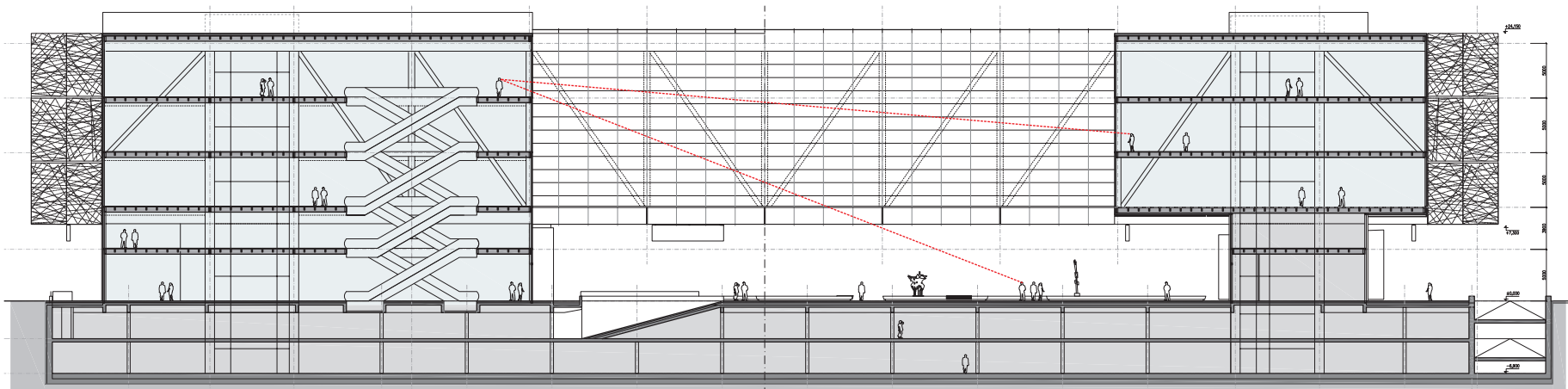
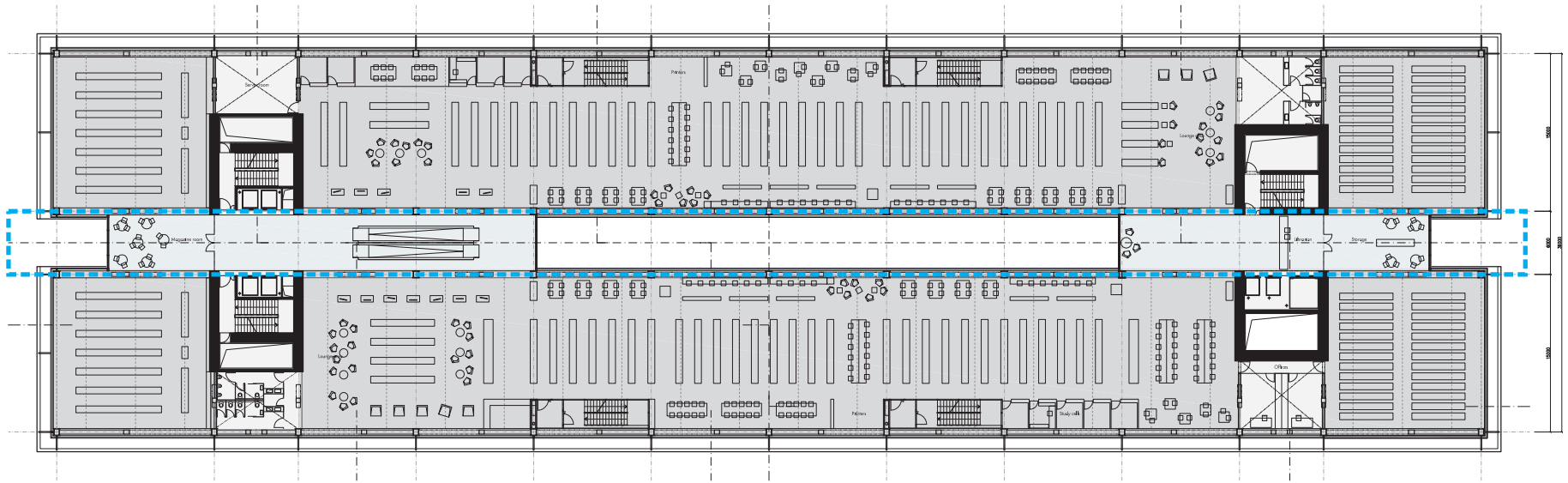
Structure



	500m ²	50m ²	2 x 1350m ²	50m ²	500m ²
+3	Offices	Bathrooms Individual offices	Learning center	Bathrooms Individual offices	Mediathek
+2	Magazines		Library		Storage
+1	Classrooms Auditorium		Library		Storage



Spatial distribution



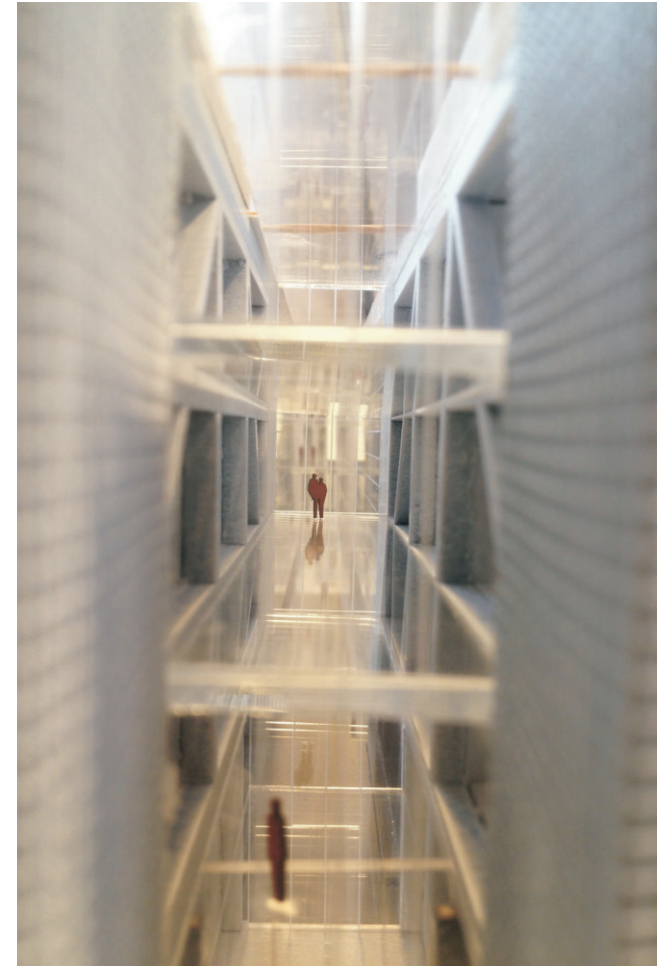
Interior - Connections



Ground Floor - West

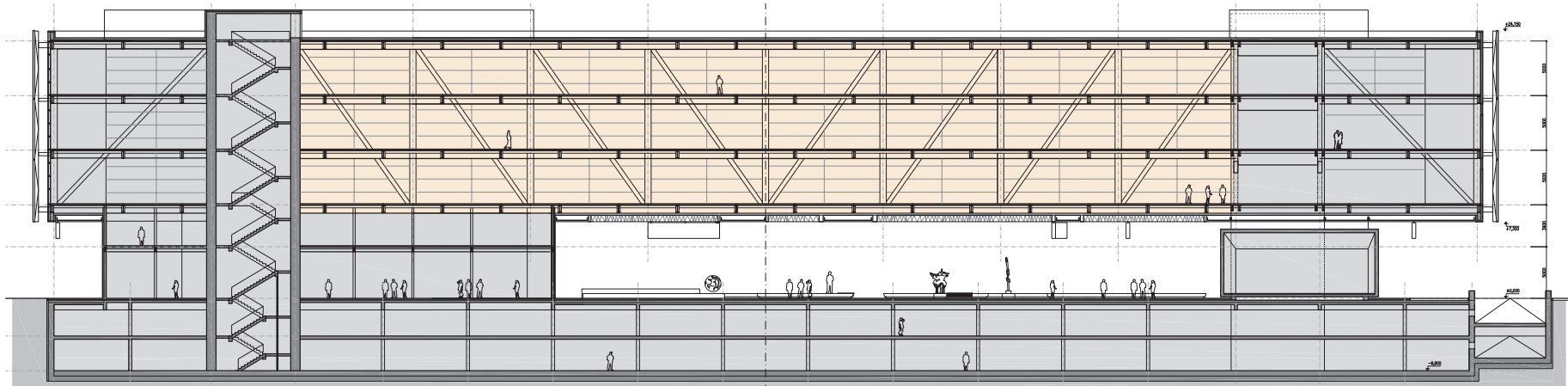
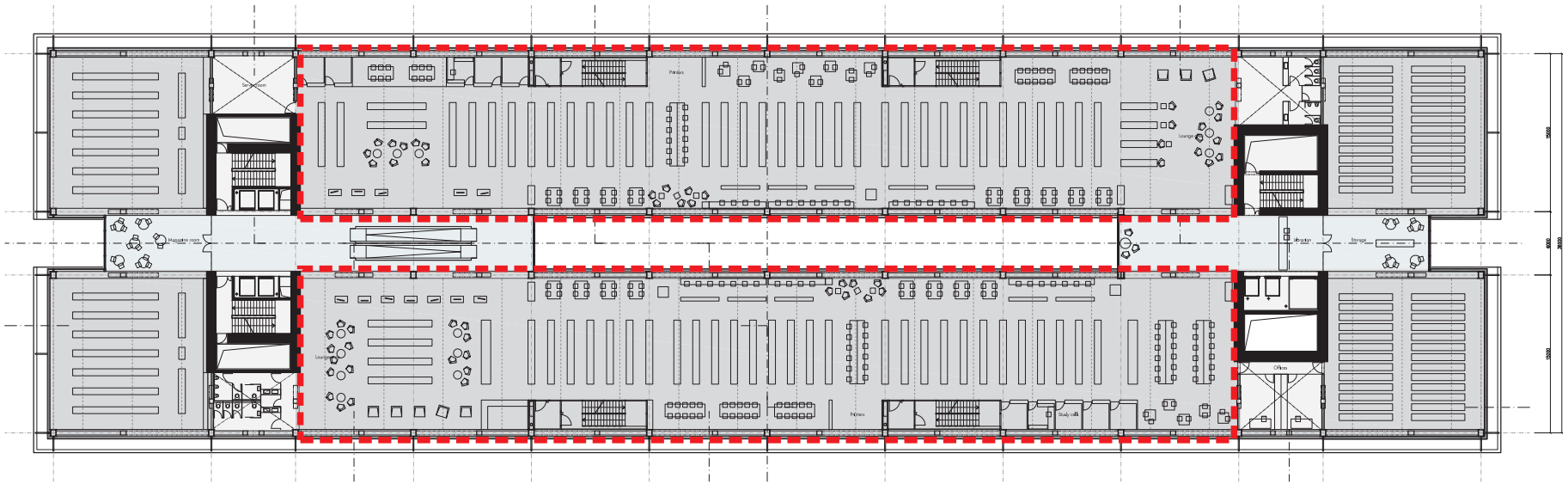


Second floor - West

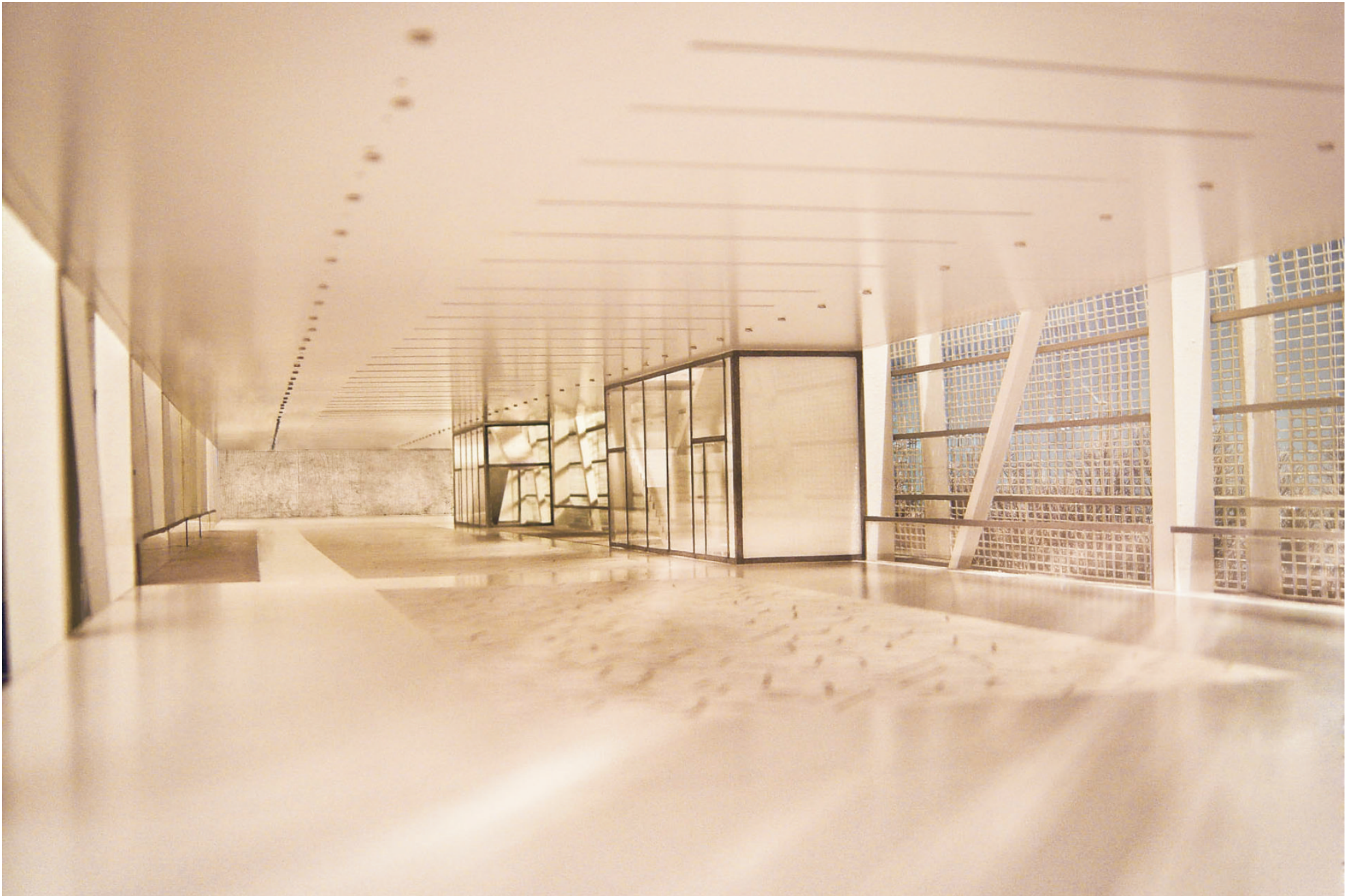


Top floor - East

Interior - Connections



Interior - Collection and Study



Interior - Collection and Study



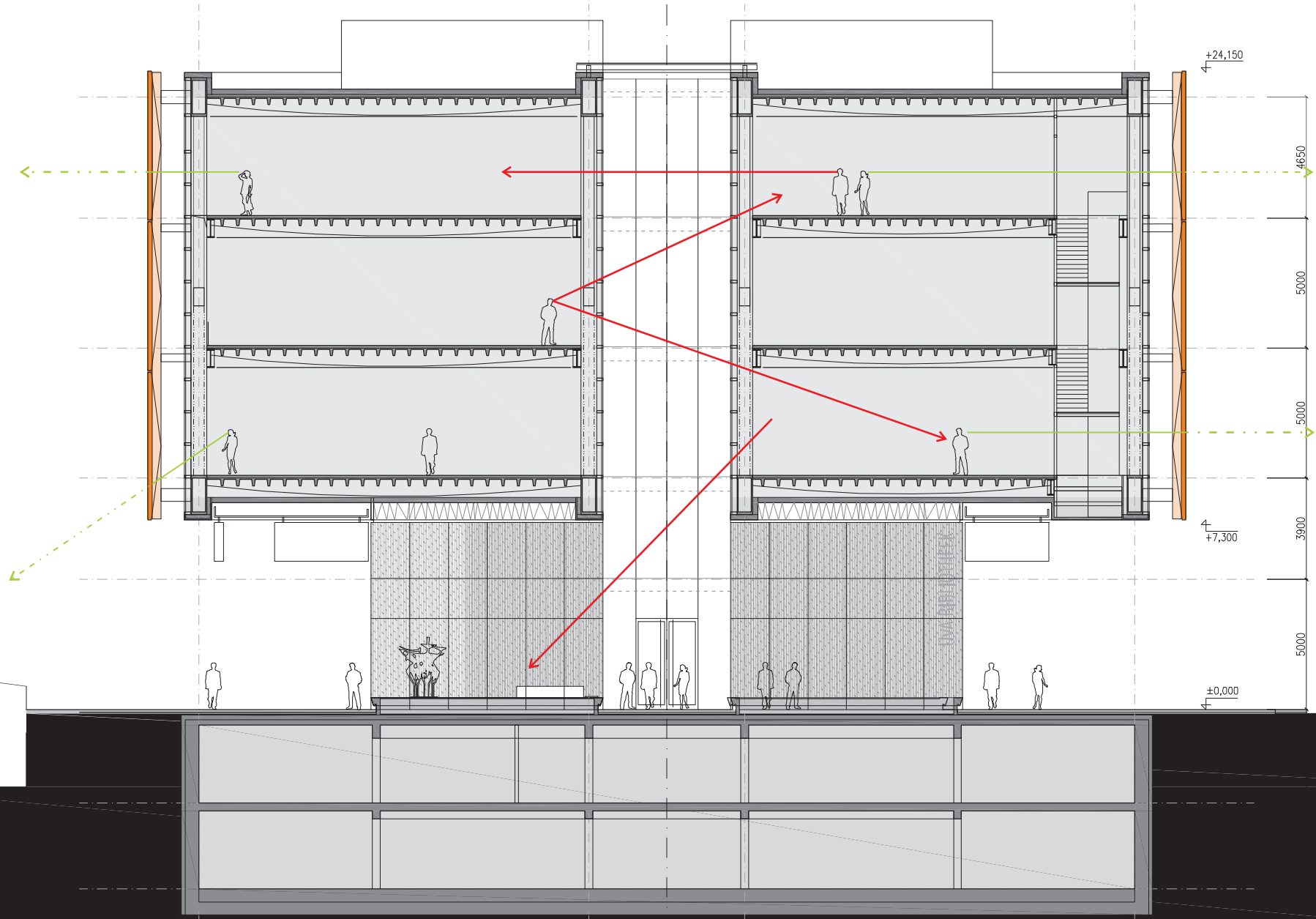
Interior - Collection and Study



Interior - Collection and Study

SOUTH

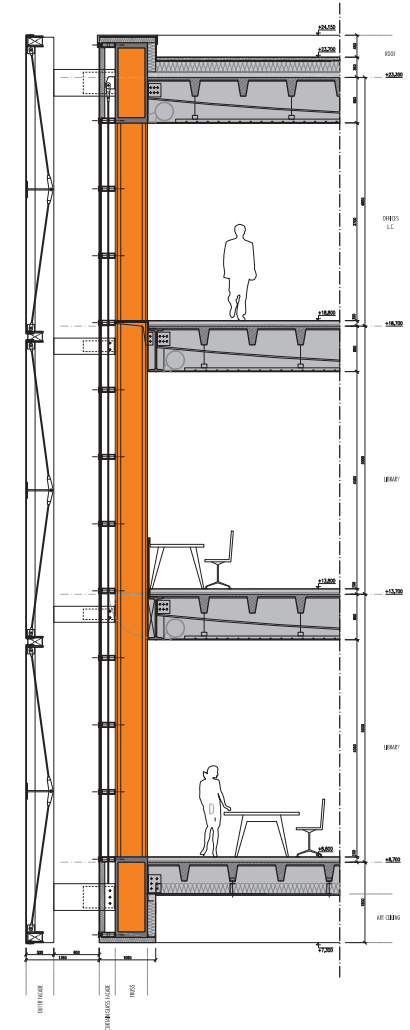
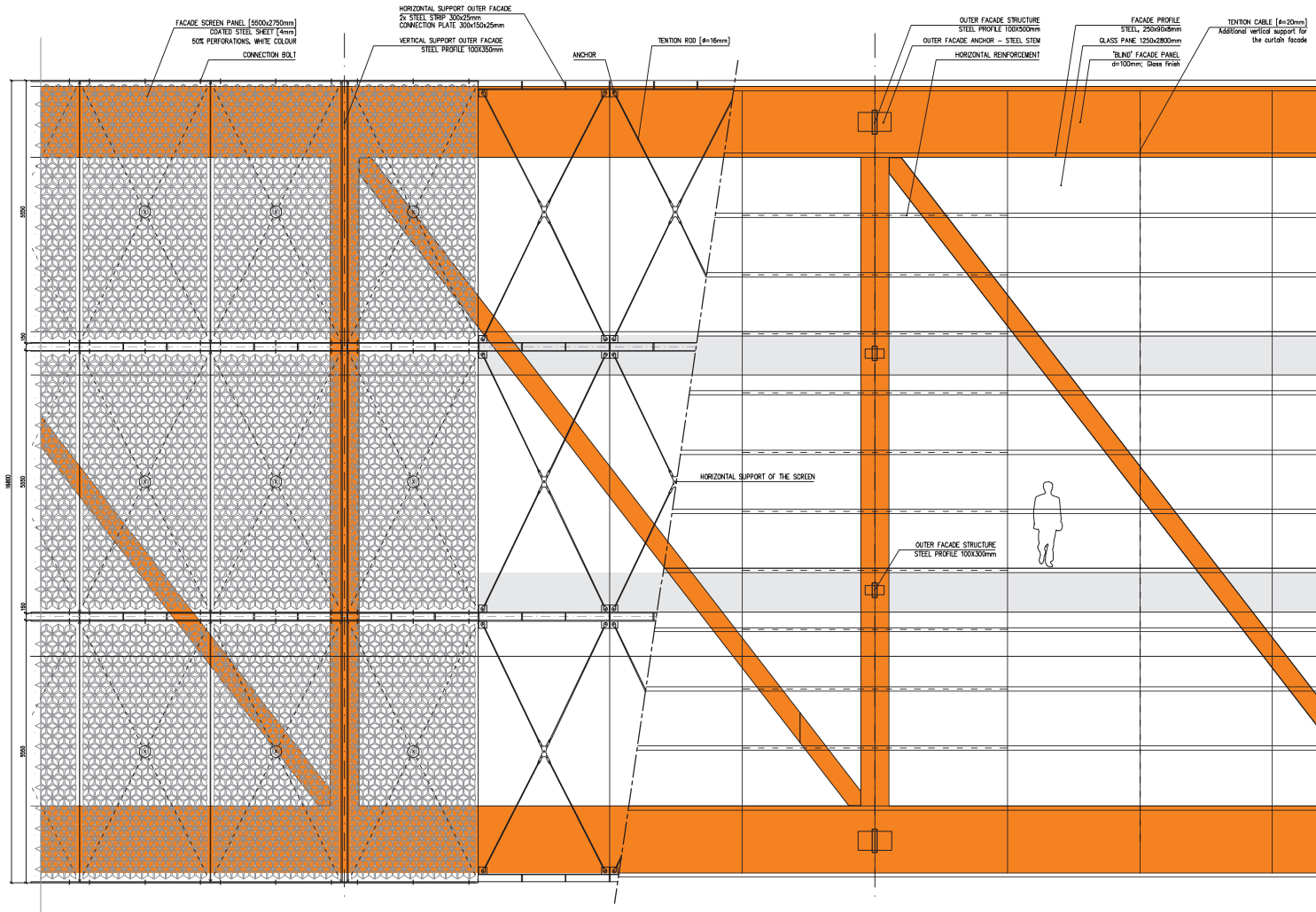
NORTH



Views

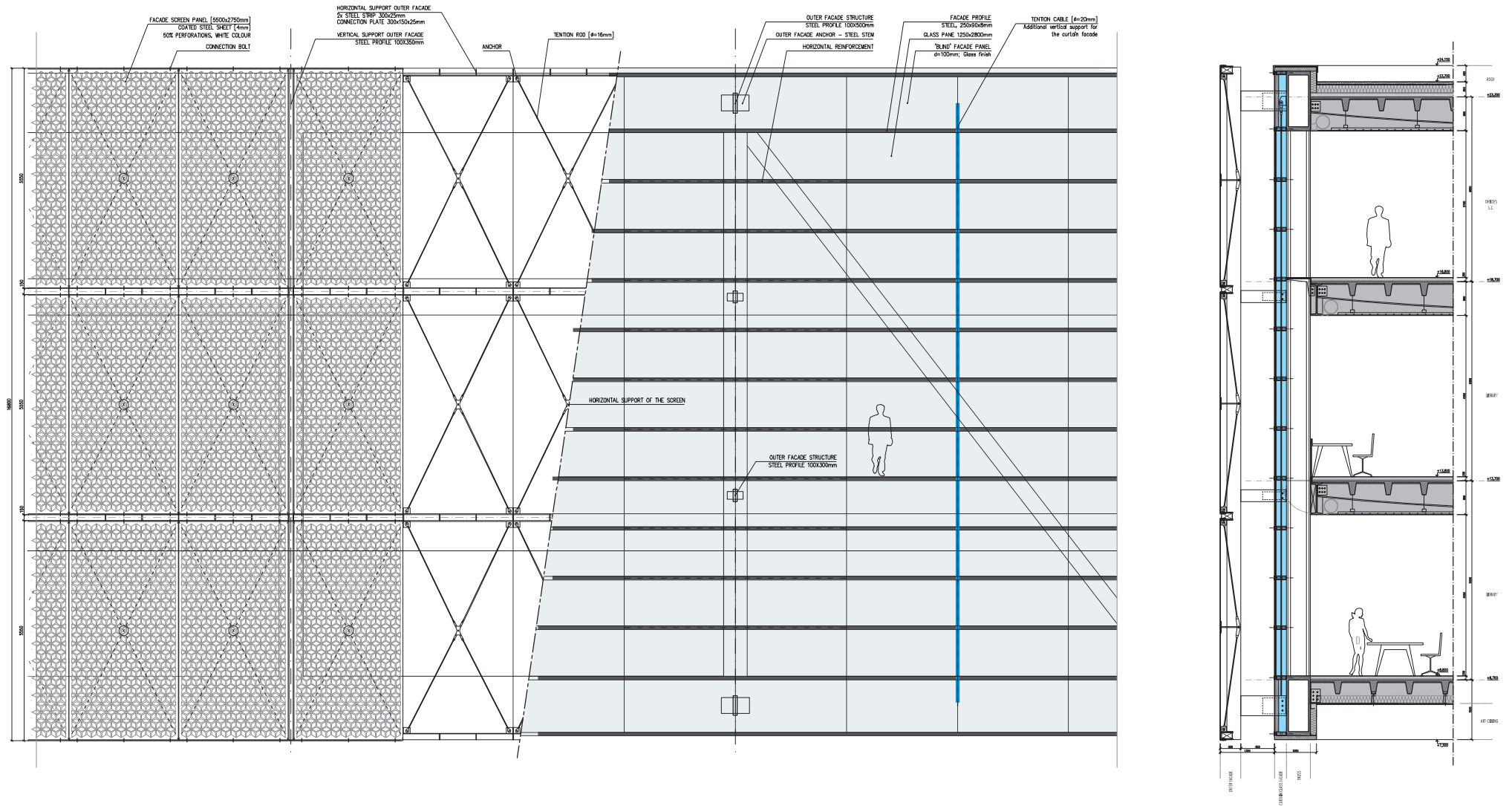
Views





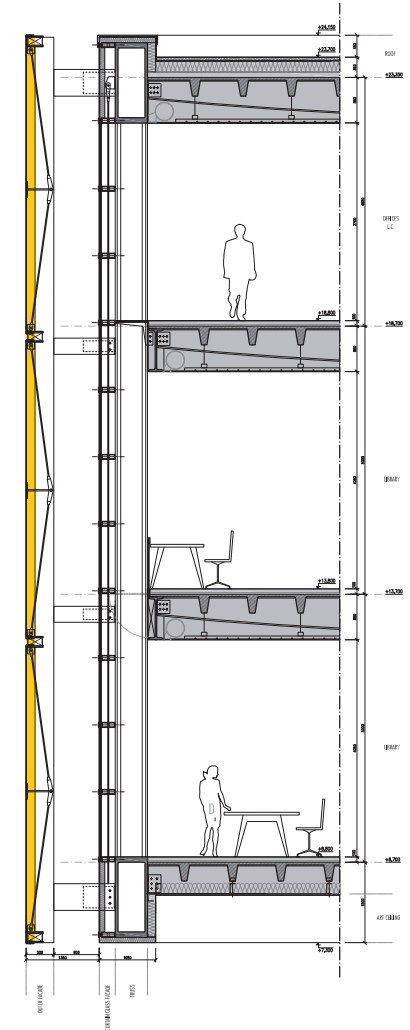
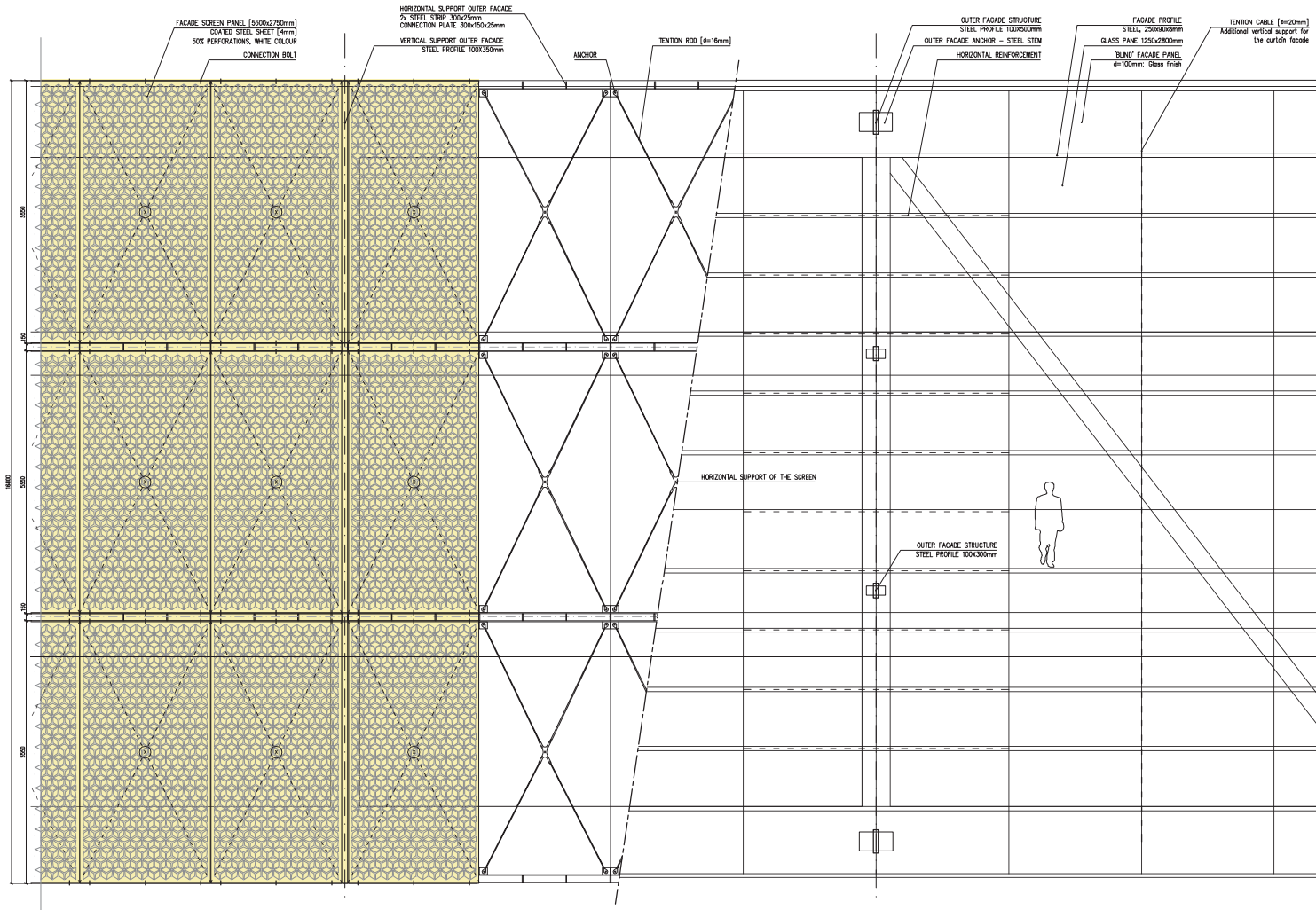
Floors arrive to the side of the trusses
Truss - continuous along its full height

Facade layers



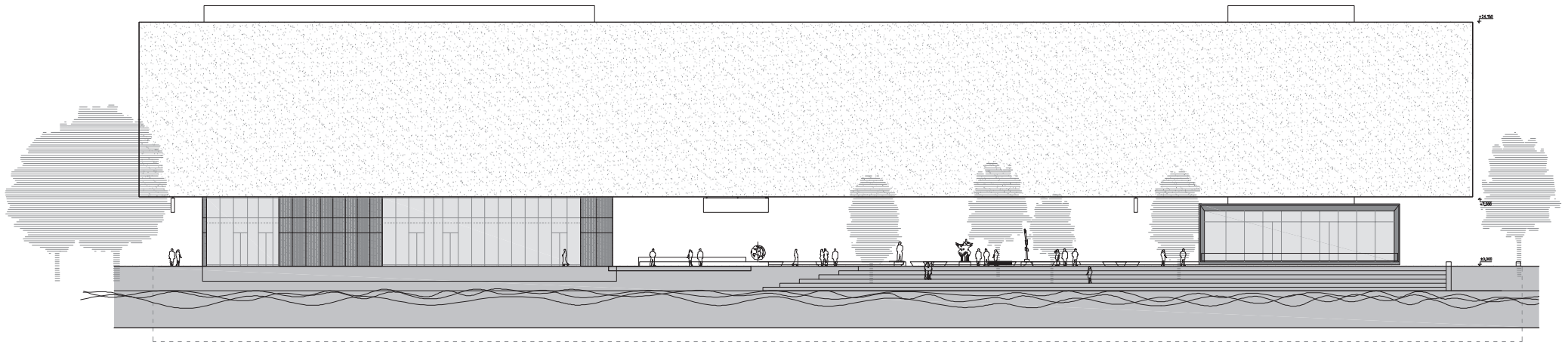
Curtain glass facade - horizontal segmentation
 Additional horizontal reinforcement and vertical tension cable

Facade layers



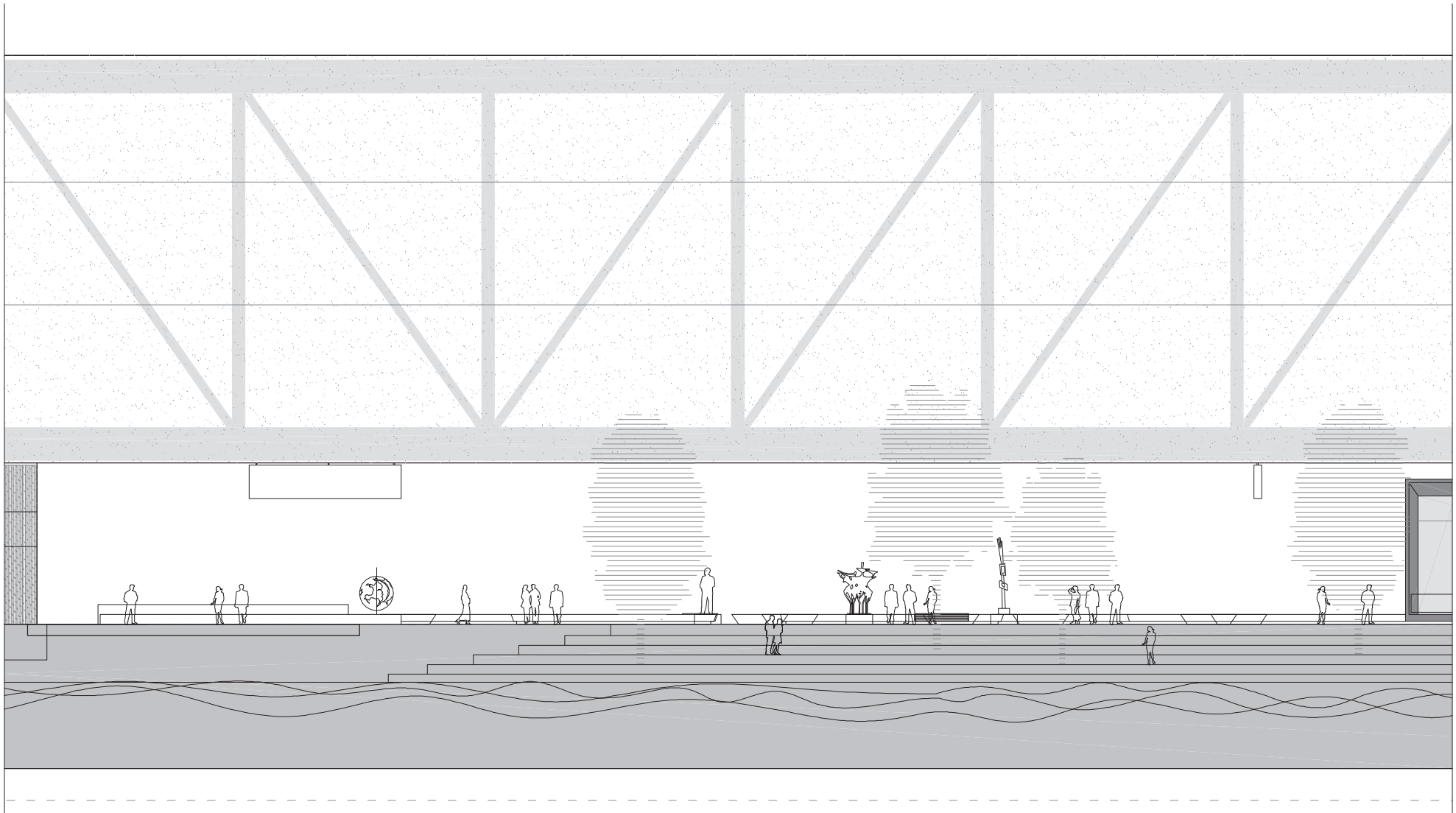
Screen - Perforated coated metal panels - 5500x2750mm
 Blocking the view, reducing sun light intakes
 Defines the building appearance

Facade layers



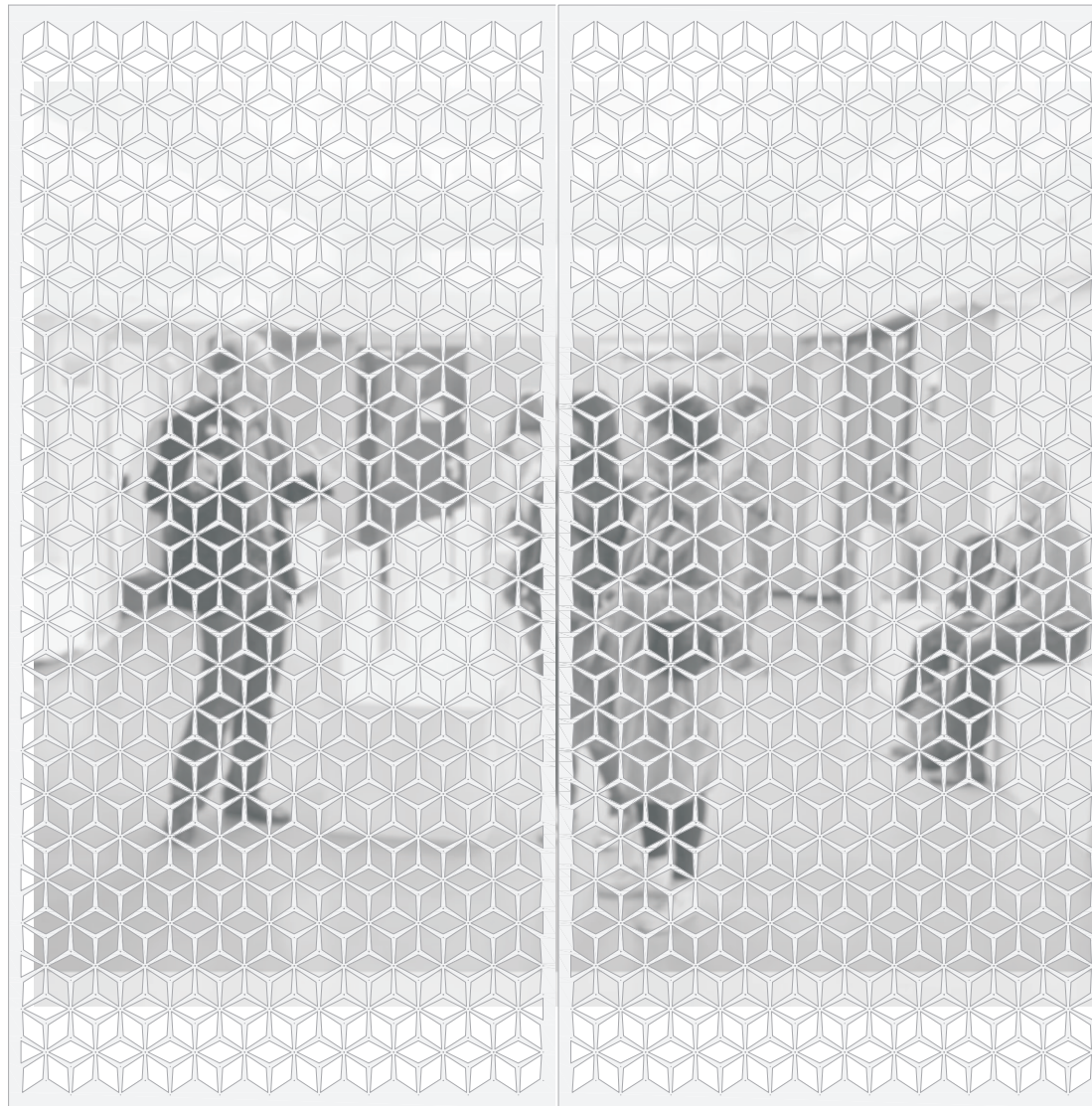
From the distance building appears like an anonymous prism hovering above the ground

Facade appearances



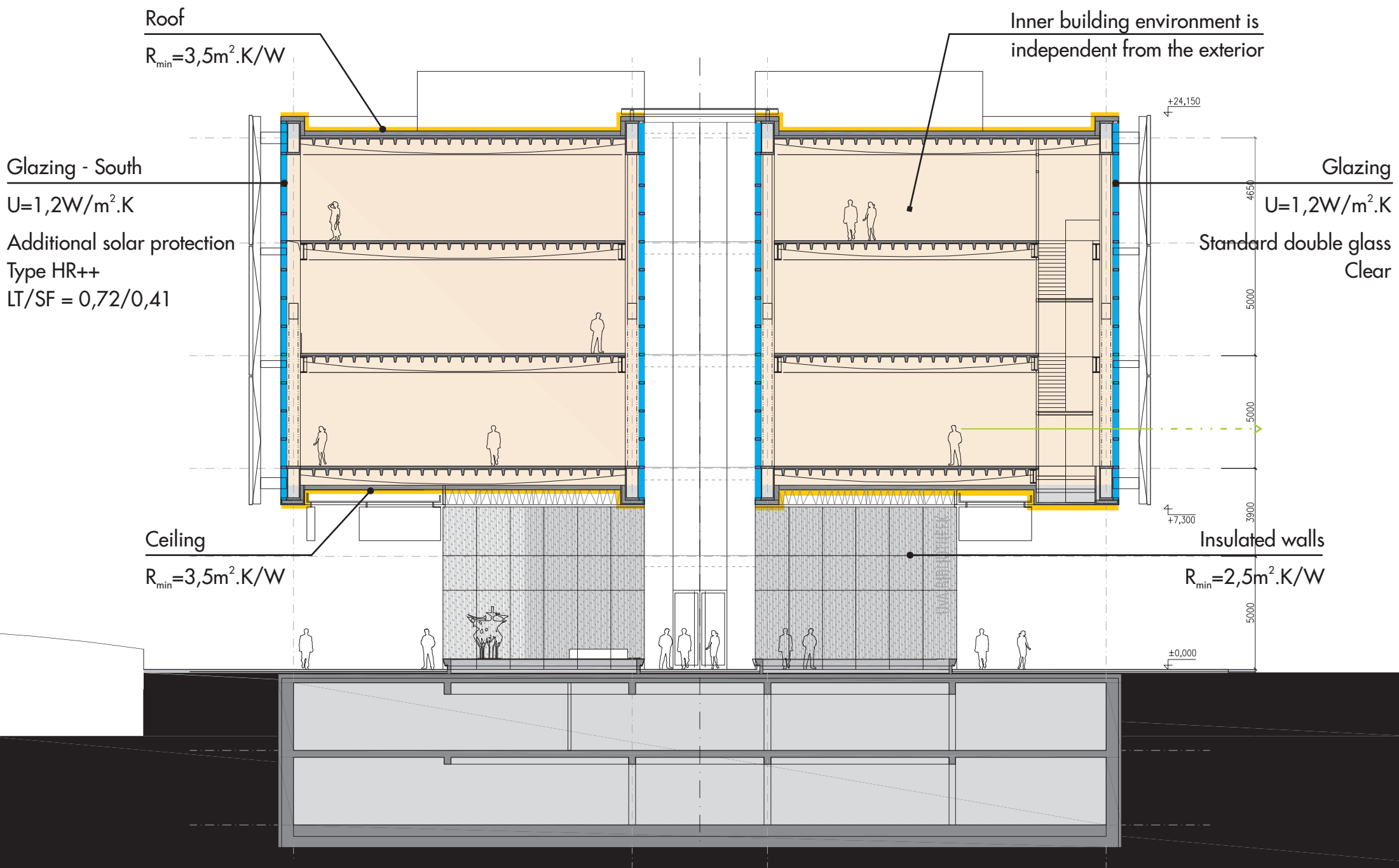
Modularity and scale of the facade panels is noticable

Facade appearances

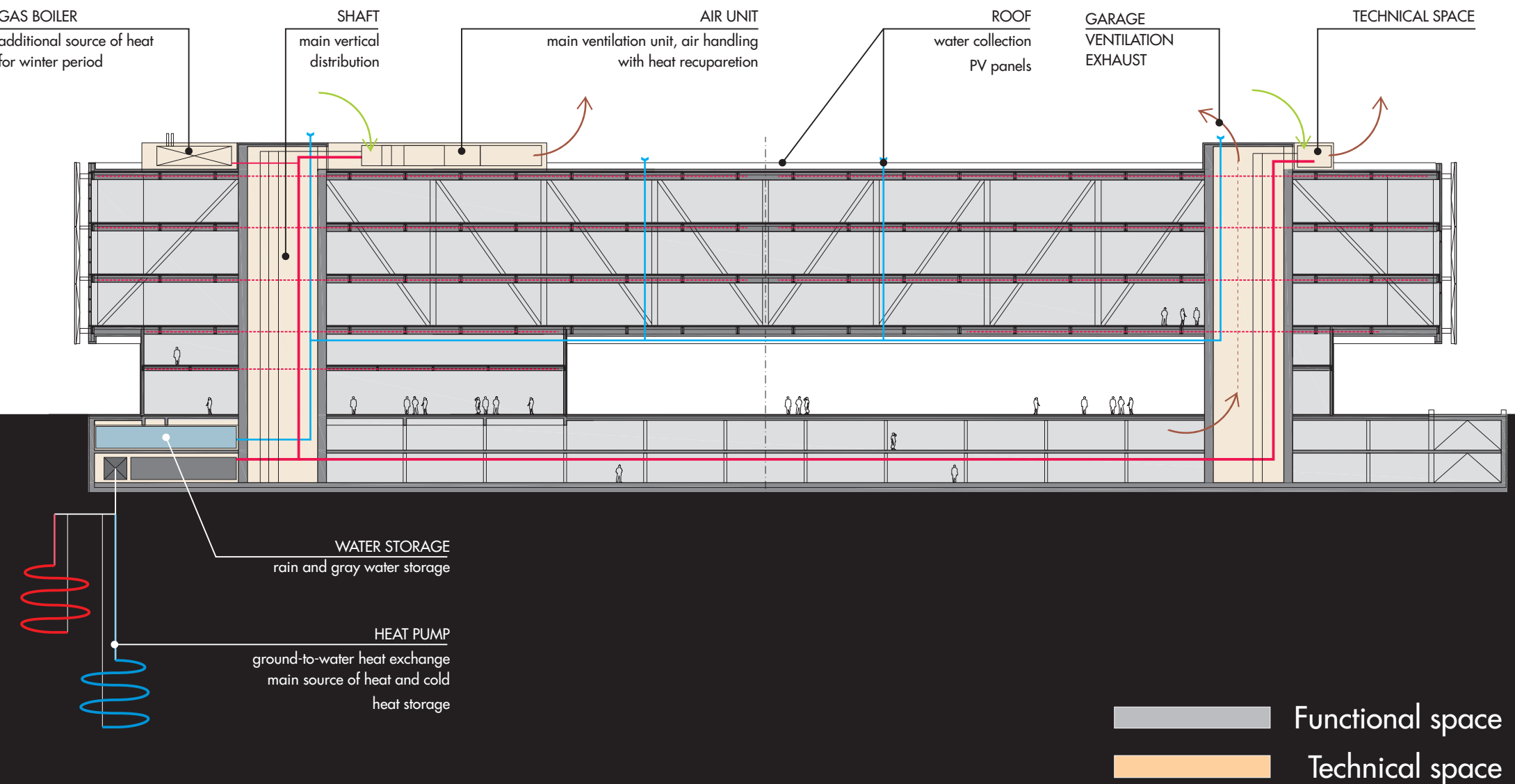


View to the inside through the pattern of the facade

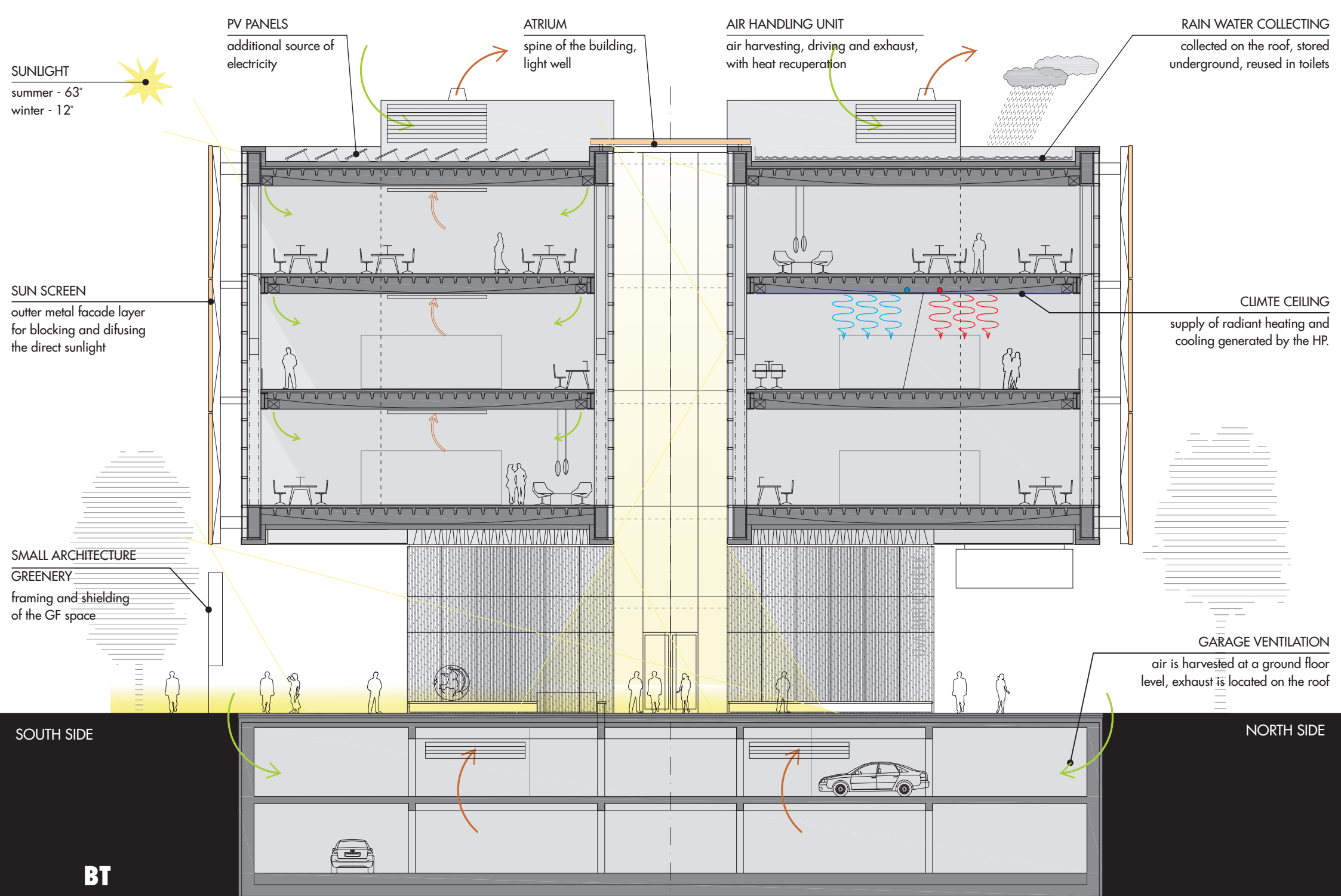
Facade appearances



Building envelope



Energy sources and ditribution



PV PANELS
additional source of electricity

ATRIUM
spine of the building, light well

AIR HANDLING UNIT
air harvesting, driving and exhaust, with heat recuperation

RAIN WATER COLLECTING
collected on the roof, stored underground, reused in toilets

SUNLIGHT
summer - 63°
winter - 12°

SUN SCREEN
outer metal facade layer for blocking and difusing the direct sunlight

SMALL ARCHITECTURE GREENERY
framing and shielding of the GF space

CLIMATE CEILING
supply of radiant heating and cooling generated by the HP.

GARAGE VENTILATION
air is harvested at a ground floor level, exhaust is located on the roof

SOUTH SIDE

NORTH SIDE



HANGING LAMPS
in the areas for relax and leisure

ILLUMINATION OF THE
TRUSSES

CEILING LIGHTS
stripe and spot light inbuilt
into the lowered ceiling

TASK LIGHTING
FURNITURE LIGHTS

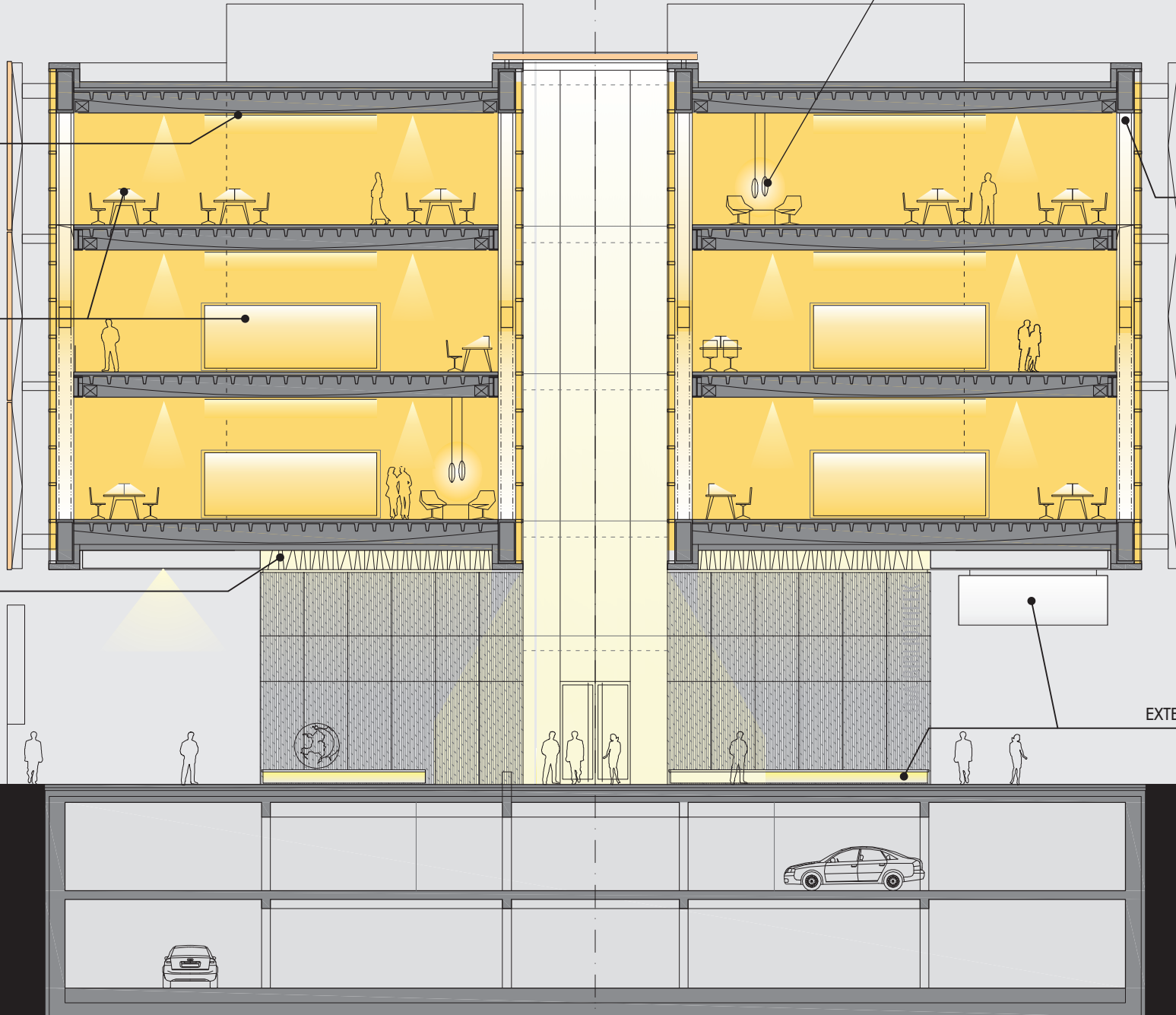
ILLUMINATED CEILING
ambient light from the
artistic ceiling

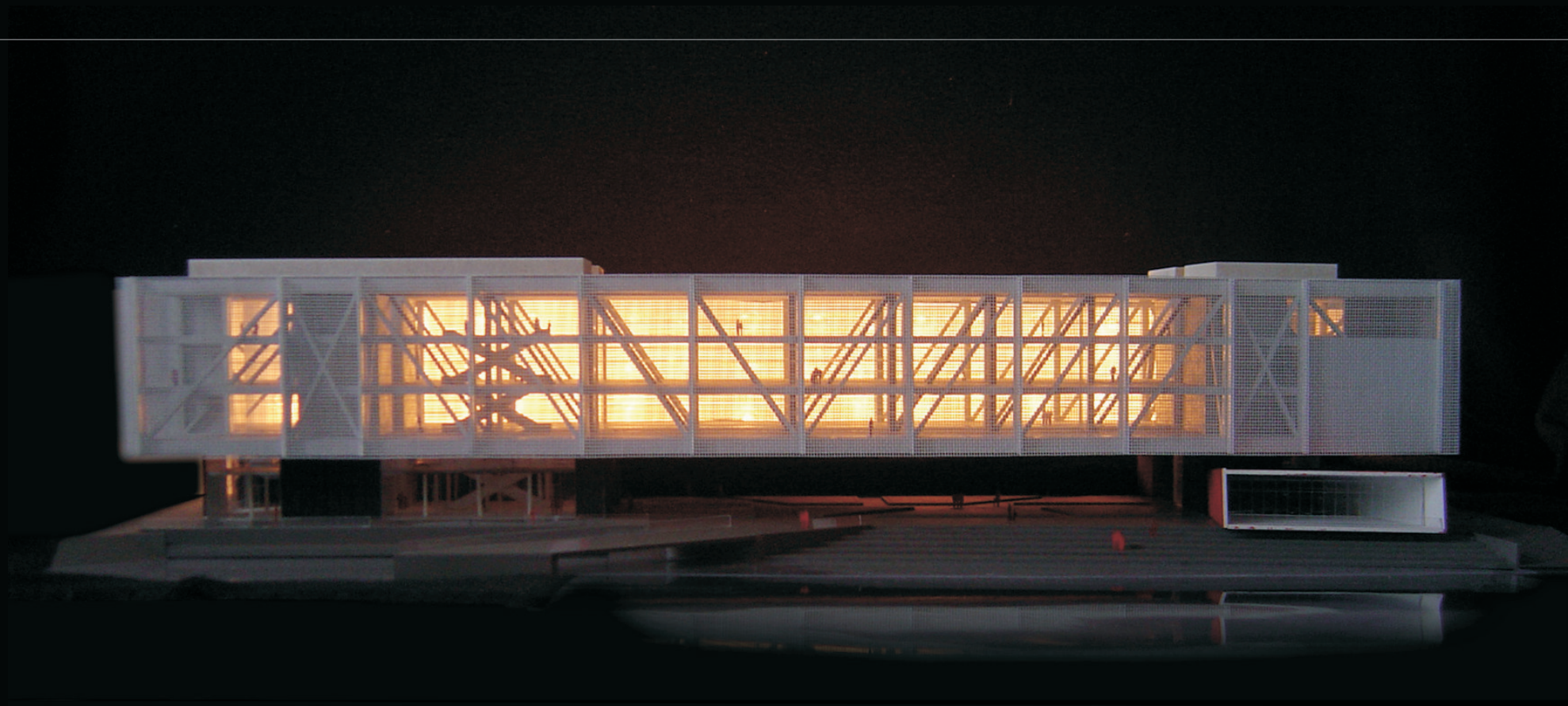
EXTERIOR FURNITURE

SOUTH SIDE

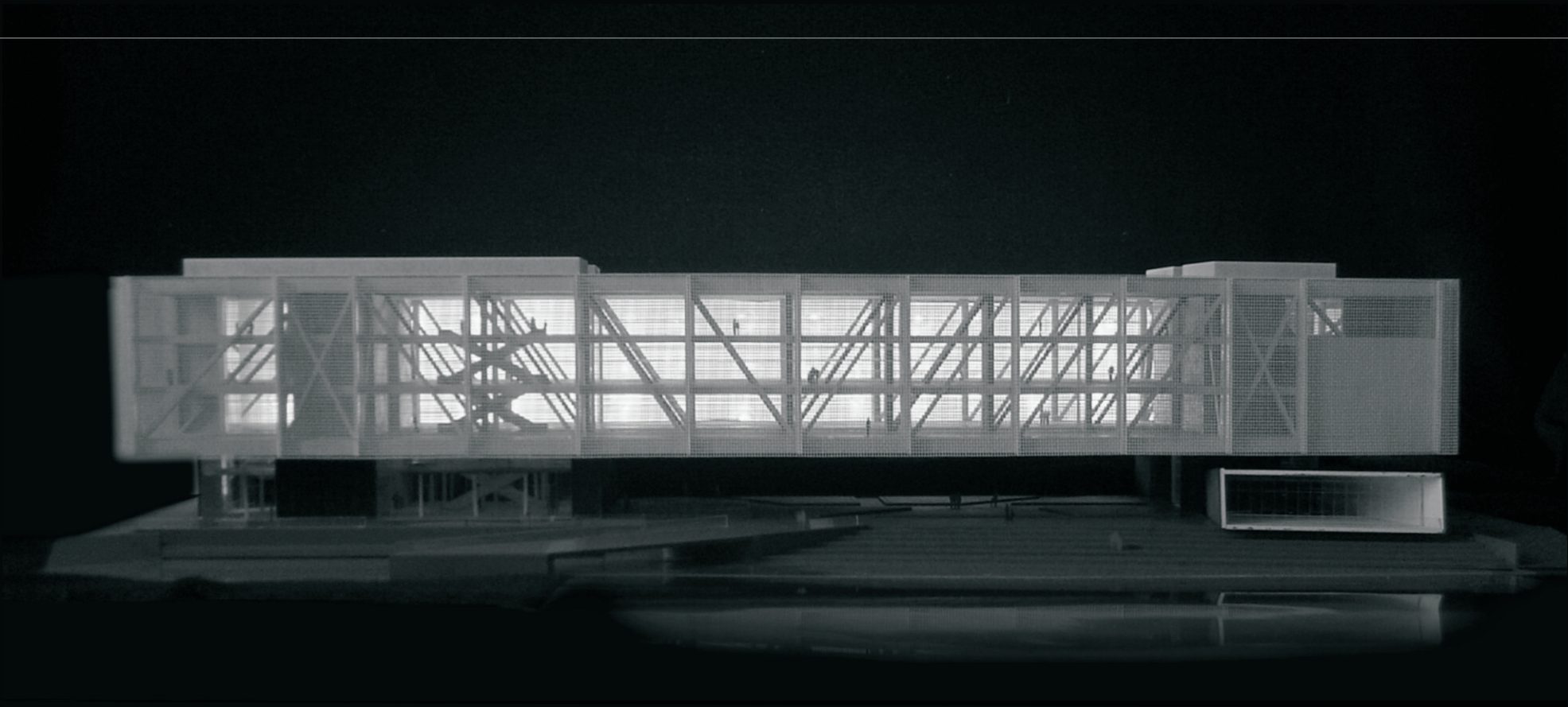
NORTH SIDE

LIGHTING





NIGHT VIEW



Thank you

Thesis tutors for guiding me through the thesis project and sharing their knowledge

Ďakujem Rodičom, Kubkovi a Babe za ... no vlastne za všetko

Catalina and Stephanie for making our house a home at all times

Friends for encouragement and cheerfull distractions during work days

Thank you for your attention

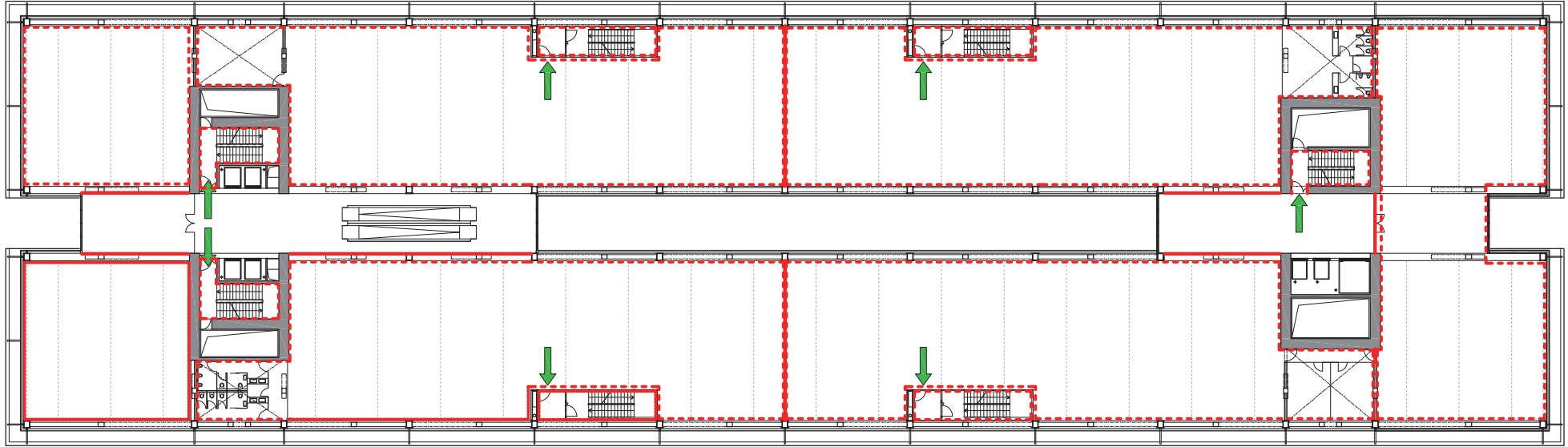
Eva Závodná_4117999

Christoph Grafe

Mark Pimlott

Henk Muhl

Interiors, Building and Cities
Faculty of Architecture, TU Delft



FIRE SECTORS